

Semester	Department	Course	CourseName	Course Description for Sustainability Focused Courses
B20Q	AD	2029	Contemporary Artist as Researcher and Activist	<p>The student will be introduced to a contemporary stream of visual culture that places nature, ethos, competing ideologies, and our relationship to these within the context of emergent forms of art activism. In response to environmental and social crisis, theory and praxis figure significantly in the work of artists and artist collectives from around the globe whose practice manifests as socially engaged art (SEA) defined by Pablo Helguera; data/information reimagined as by Mona Hatoum and Trevor Paglen; or examinations of reconciliation and mass trauma in the work of Doris Salcedo and Kara Walker. In some cases, artworks engage with nature/culture by their placement in site-specific locations, through new modes of picturing, and/or through the appropriation of hypothetical scientific musings or emerging technologies (e.g., Ed Atkins, fictionalized genetic hybridization and subversion of surveillance tools). Many of the artists we examine make use of new tools designed for industrial purpose, medical, agricultural, or scientific research. Others further participatory dialogues within anti-racist, de-colonizing, and queer-centred discursive practices. This work is inherently transdisciplinary and human ecological in disposition and character. Many of these producer-artists appropriate the role of “researcher” in order to bring attention to ecologies that human beings have disrupted or will disrupt. Doris Salcedo, Tacita Dean, Kara Walker, Mark Dion, Shirin Neshat, Ai Weiwei, Andra Ursuta, Karim Ben Khelifa, Raven Chacon, Frances Alys, Natalie Jeremijenko, Guillermo Galindo, among others, will be considered. Evaluation is based on class participation, evidence of completion of weekly readings, a final paper, and a class presentation.</p> <p>Level: Introductory/Intermediate. Prerequisites: none. Lab fee: \$50. Class limit: 15. Meets the following degree requirements: AD HY</p>
B20Q	ED	1019	Advocacy and Education for English Learners	<p>Cultural and linguistic diversity in the classroom is becoming increasingly prevalent around the world. In the United States, for example, approximately ten percent of all students in public schools are English learners (ELs), i.e., students who are in the process of acquiring English as an additional language. ELs enjoy valuable opportunities with their additional set of cultural and linguistic resources, but they may also face discrimination as a result of racism, linguisticism, and/or xenophobia. These forms of discrimination, along with other systemic barriers, can negatively affect ELs’ academic achievement and sense of belonging in their schools and communities. This course, based on a framework of culturally and linguistically responsive pedagogy, has two overarching goals. First, it aims to equip aspiring educators with the tools to recognize and respond to bias and inequity in the education of ELs. Second, it aims to introduce these future educators to the fundamental principles and techniques for teaching and advocating for culturally and linguistically diverse students. Human ecologists planning to work as educators in the school or the communities to serve ELs and their family will find this course helpful. Students who take this course will learn through active and critical engagements with readings and audio-visual materials, whole-class and group discussions, reflective and analytical writings, lesson planning, micro-teaching, and project planning. They will be evaluated through weekly responses to course materials as well as individual and team project-based assignments, such as interviews with ELs or current EL educators, advocacy projects targeting issues affecting ELs, outreach initiatives that build partnerships and/or enhance cross-cultural understanding.</p> <p>Level: Introductory. Prerequisites: None. Class limit: 15. Lab fee: None.</p>

Semester	Department	Course	CourseName	Course Description for Sustainability Focused Courses
B20Q	ED	2010	Disability Rights in Education	<p>Across the country, varying state regulations and practices call into question the manner with which students with disabilities are taught, served, and prepared for the future in an economically and socially challenging community and environment. Their rights are governed by the Rehabilitation Act of 1973, the Americans with Disabilities Act, and the Individuals with Disabilities Education Act. Course participants will learn how students with disabilities are ensured their rights to access and a free appropriate public education as well as how this translates into post-secondary education, employment, and society. Students will be evaluated on synthesis of information in written format and in visual presentation and on in-class multi-modal engagement. Students will also be expected to complete an independent research project evaluating the manner in which disability rights are ensured within the very community and environment in which we live.</p> <p>Level: Introductory/Intermediate. Prerequisites: None. Class Limit: 15. Lab fee: none.</p>
B20Q	ES	1028	Marine Biology	<p>This is a broad course, covering the biology of organisms in various marine habitats (rocky intertidal, mud and sand, estuaries, open ocean, coral reefs, deep sea), and some policy and marine management and conservation issues. The largest part of this course is focused on learning to identify and understand the natural history and ecology of the marine flora and fauna of New England, with an emphasis on the rocky intertidal of Mount Desert Island. The course meets twice per week with one afternoon for laboratory work or field trips. Evaluations are based on the quality of participation in class, one in-class practical, several sets of essay questions, and a field notebook emphasizing natural history notes of local organisms. This class is intended for first year students, who will have priority during registration. Returning students may take this course only with permission of the instructor.</p> <p>Level: Introductory. Prerequisites: Signature of instructor for returning students. Offered at least every other year. Class limit: 20. Lab fee: \$80. Meets the following degree requirements: ES</p>
B20Q	ES	1072	Chemistry and Biology of Food and Drink	<p>Introductory chemistry and biology are explored in the context of food and drink: the biology of crops, culinary chemistry, and the biochemistry of brewing. Major chemistry topics include atomic structure, periodicity, bonding, acid base chemistry, kinetics, equilibrium, colloids, and solubility of gases in liquids. Major biology topics include photosynthesis, respiration, plant and yeast life histories, cellular reproduction, and metabolism. We will also explore agricultural chemistry from a systems perspective: examining strategies to for keeping pace with the demand for nitrogen and phosphorous in soils. This course is meant to offer important, fundamental chemistry and biology through the framework of food, a universal human experience. These fundamental topics in Chemistry and Biology will be explored from the ground up, so no prior experience is required. Meanwhile, the culinary and agricultural framework should offer enough new content for students with a background in natural sciences. Students will be evaluated based on participation in classroom and laboratory sessions, projects, and quizzes.</p> <p>Level: Introductory. Prerequisites: None. Class limit: 15. Lab fee: \$60. Meets the following degree requirements: ES</p>

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B20Q	ES	2010	Ecology: Natural History	<p>This course emphasizes field studies of the ecology of Mount Desert Island, incorporating labs and field trips. Each exercise focuses on a central ecological concept. Topics include intertidal biology and diversity, forest trees and site types, bedrock geology, soil biology, insect diversity, pollination ecology, freshwater biology, predation, herbivory, and the migration of birds. Discussions include the development of natural history as a science and the role of natural selection in the evolution of diversity. Students are expected to keep a field notebook or journal, to undertake a project, and to write a term paper. Class meets for two lecture sessions and one lab session or two field/lab sessions per week. The course is particularly appropriate for students concentrating in Environmental Education. This class is intended for first year students, who will have priority during registration. Returning students may take this course with permission of the instructor.</p> <p>Level: Introductory/Intermediate. Prerequisites: None; field work involves strenuous hiking. Class Limit: 11. Lab fee: \$75. Meets the following degree requirements: ES</p>
B20Q	ES	3044	Climate and Weather	<p>This class will explore general weather and climate patterns on global, regional, and local scales. We will discuss the major forcings driving global climate fluctuations - on both long (millions of years) and short (days) timescales, including natural and anthropogenic processes. We will also learn about basic meteorology and the processes producing some common spectacular optical weather phenomena (rainbows, coronas, cloud-types, etc). Students will complete a term project comprising a photo-documentary journal of the different weather phenomena they observe during the 10-week term. The field component of this course will be self-guided through the observation and documentation of weather phenomena. Who should take this course: No prior geology/science experience is needed - but expect to do a bit of basic math in this course! The course level is intermediate because it will not cover foundational principles of geology (or other sciences) but instead the course will be integrative and require students to practice both their quantitative and qualitative skills. Take this course if you are passionate or curious about climate change, but do not know much about the science of climate and weather!</p> <p>Level: Intermediate. Prerequisites: none. Class limit: 16. Lab fee: \$10 Meets the following degree requirements: ES</p>

Semester	Department	Course	CourseName	Course Description for Sustainability Focused Courses
B20Q	HS	2105	Writing for Social Change	<p>Designed to meet the first-year writing requirement, this course gives students the opportunity to explore rhetorical strategies of writing for social change. Beginning with writing that emerged in the wake of George Floyd's death, we will read and analyze articles and essays that deal with a range of contemporary social issues.</p> <p>By examining the principles of exposition and argumentation, students will develop their analytical skills. Students should expect to spend a significant amount of time on sentence-level construction. Grammar and syntax are powerful tools that can be used to craft persuasive, moving arguments. Grammar and syntax can also be used to mislead and manipulate an audience. Understanding grammar and syntax is essential for reading and writing well. But whose grammar and syntax are we talking about when we say "writing well"? Standard American English or Edited American English is the written language taught in most American schools and used in much of the media that we consume. But it is not the only English available to us. By de-penalizing and making space for "nondominant Englishes" (Asao B. Inoue), we will explore how "language functions within and from various cultural perspectives" (Vershawn Ashanti Young). By practicing the art of code-meshing, students will explore "the connection between language and identity" (Neisha-Anne S. Green) and develop "critical awareness of choices that are rhetorically more effective" (Suresh Canagajah).</p> <p>Classes will focus on both writing activities that teach students to explore and strengthen their prose, and discussion and analysis of the works we read. Two short academic papers will help students develop a writing process that works for them. Additionally, students will engage in activist writing throughout the term, allowing them to put the writing strategies they have learned into action. The culmination of the term will be a research project on a social issue of their choosing that will test their ability to put rhetorical strategies to effective use.</p> <p>Evaluation is based on engagement in class discussions and successful completion of all writing assignments (weekly activist writing, two analytical papers, and a final writing project).</p> <p>Level: Introductory/Intermediate. Prerequisites: None. Class limit: 12. Lab fee: None. Meets the following degree requirements: W</p>
B20Q	HS	3073	Bees and Society	<p>In the last decade the plight of wild and domesticated bees has pervaded the media and public discourse, yet bees remain largely misunderstood in our society. This course examines the interconnected relationship between humans and bees and asks what bees can teach us about ourselves and our food systems. Through readings, fieldtrips, and guest lectures, students will examine the social, economic, and political dimensions of human-bee interactions, investigating topics such as: historical and contemporary beekeeping practices; the political economy of honey; the role of pollination in agriculture and agroecosystems; domestication and human-animal relationships; biodiversity loss in agricultural systems; pollinator conservation and policy; and cooperation and decision-making in human and bee societies. A truly human-ecological course, Bees & Society integrates the humanities, natural sciences, and social sciences to examine the applied problem of protecting pollinators in a time of abrupt environmental change. Students will be evaluated based on: (1) participation in class discussions, fieldwork, and field trips; (2) a series of short reflection papers; and (3) a final class project. For their final project, students will develop two native bee conservation workshops—one for elementary school students and one for farmers and gardeners—and host the workshops at COA's farms.</p> <p>Level: Intermediate. Prerequisites: None. Class limit: 14. Lab fee: \$60. Meets the following degree requirements: HS</p>

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B20Q	HS	3074	Mapping the Ocean's Stories	<p>This course will examine how members of Maine's remote coastal and islands communities live in relationship to the ocean. Their connection to the nearby and distant waters is defined by everyday uses such as fishing, lobstering, and wrinkle harvesting as well as deeper historical relationships rooted in many generations of people doing everything from sailing schooners around the world to harvesting shellfish in the same cove over centuries. This class will teach students how to use multi-disciplinary research methodologies to document, map, and analyze both contemporary and historical uses of the ocean. Using coastal and island communities as sites for collaborative community-based research the class will contribute to wider discussions about a process known as Ocean Planning that seeks to create processes to plan how communities, stakeholders, industry and the government build a long term vision of how the spaces of the Gulf of Maine might be used. Students will work in teams to produce a geo-referenced story about a particular place in the ocean off the coast of Maine that has meaning and an emotional connection to a community told in an interesting and compelling way. This information will help give island communities a stronger voice in ocean policy and in decision making processes for siting large scale projects in the nearby ocean environment. The class will draw on methodologies developed around North America to document the everyday uses and interactions people have with the local environment using oral historical and biographical mapping to provide a sort of snapshot of current uses as well as soliciting histories of how those patterns have changed over time. The class will include a substantial fieldwork and field trip component that will require additional times outside of the class schedule. Students will be evaluated on class participation, active engagement in field research settings, short assignments as well as a final project. The class is appropriate for students with a range of backgrounds, however, experience with historical or community-based research or GIS mapping would be helpful.</p> <p>Level: Intermediate. Prerequisites: Preference will be given to students who have previous community-based research experience or other academic background directly relevant to the course. Class limit: 15. Lab fee: \$150. Meets the following degree requirements: HS</p>
B20Q	HS	4053	Economics of Cooperation, Networks & Trust	<p>Economics is slowly expanding from equilibrium-based, atomistic optimization, through dyadic strategic interaction, to the consideration of networks and complexity. At the same time, it is beginning to incorporate more complex human motivations beyond simple optimization as means of explaining economic outcomes. This course captures these trends by the study of the economics of cooperation, networks, and trust. We will focus on four major ways of understanding cooperation: individual optimization, strategic optimization, institutions, and embedded social relationships (networks), and we will apply cooperation to the contexts of commonly held resources (such as fisheries and climate), networks and strategic alliances, and formal economic organizations (cooperatives). After an introduction to the relevant issues and an examination of the standard neoclassical approach of optimization (with cooperation as part of the choice set), we will enrich our understanding of group cooperation through the examination of social capital, tacit knowledge, and common pool resources. We will then have a brief exposure to game theoretic approaches to conceptualizing strategic behavior, along with graph theory as a means of conceptualizing networks. With these tools in hand, we will examine the role of networks in economic contexts such as the networks of Emilia Romagna, the Mondragón complex, and worker-owned businesses in the United States and Canada. This course will be of interest to students interested in business and organizational management, natural resource management, sociology, community development, globalization, social movements, economic democracy, and a host of other topics. Evaluation will be based on participation in classroom discussions, several major assignments, and responses to reading questions. We will collaboratively decide on a final project; possibilities poster presentations, a community presentation, or a jointly produced research or policy paper.</p> <p>Level: Intermediate/Advanced. Prerequisites: One course in college or IB economics. Class limit: 15. Lab fee: \$40. Meets the following degree requirements: HS</p>

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B20Q	MD	1021	Seeing Ecology through Arts Practice	<p>This course is an experiment in seeing ecology through hands-on arts practice. We examine how a combined arts and science approach (observation, questioning, rendering, hypothesising...) leads to reflective practice in understanding ecological interaction and process. From visualising connectivity to sensory pattern recognition, we explore how arts practice can help us formulate (and begin to answer) scientific questions. The course will have multiple weekly place-based field components in combination with synchronous and asynchronous online teaching.</p> <p>Evaluation will be based on three components: (1) A field notebook (combined sketchbook, observation and practice journal etc) which will serve to document your process of inquiry, including observation and description (at both micro and macro level), "questions for science" derived from arts-based inquiry, and weekly field assignments. As a reflective journal, it will also critically examine your expectations, intentions, and observations of process and outcome. In addition to sketching, other creative methods of observation will be used such as frottage (rubblings), monoprint, found material collage, as well as words (e.g. haiku). (2) Reflective interaction and discussion of assigned readings (from historic (e.g. Goethe) to contemporary (e.g. Gemma Anderson)). (3) A final project that will consolidate/montage a particular vein of observation and questioning from your observation of ecological interactions (e.g. an aspect of ecology, environmental physiology or human ecology). The final project will be presented in a format for sharing with an external audience, and may include video, animation, sound recordings, sculpture, painting and other media.</p> <p>Level: Introductory. Prerequisites: None; no science or arts experience or skills required. Class limit: 12. Lab fee: TBD.</p>
B21B	ED	2011	Equity and Social Justice in Education	<p>In this course, students will be introduced to the fundamental concepts related to educational equity and social justice. They will examine how power, privilege and oppression operate across and/or at the intersection of social identities grounded in the following topic areas: poverty and socioeconomic status, gender identity and expression, (dis)ability, race as well as sexual orientation. To that end, students will engage in in-depth exploration of their social identities and check their own prejudice. Concurrently, they will practice skills that allow them to recognize and respond to identity-based biases within educational contexts and work towards creating and sustaining equitable and inclusive learning environments for all learners, but especially for those coming from the marginalized communities. Every week, students will read texts that introduce key concepts in one of the above-mentioned topic areas. They will also practice analyzing cases that depict scenarios of bias and inequity in education, using the Equity Literacy Framework. In addition to their peers, students will also engage in weekly conversations and discussions with guest speakers from diverse educational communities, such as K-12 schools, higher education institutions, educational community organizations, etc. Evaluation will be based on the following: an autoethnographic portfolio that consists of the artifacts each student produces throughout the term while exploring their own social identities as well as a reflection paper; a review of a book in one of the above-mentioned topic areas; and a final project where students work in groups to create digital resource guides that educators can use to address social justice issues with their learners.</p> <p>Level: Introductory/Intermediate. Prerequisites: An introductory course in educational or social sciences recommended. Class limit: 12. Lab fee: \$20.</p>

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B21B	ES	1076	Polar Ecology and Exploration	<p>The Arctic and Antarctic represent some of the most extreme environments on the planet. As physical places, both poles play an important role in governing the planet's climate and heat flow. Both are suspected to be rich in minerals and are thought to perhaps hold short-term relief from current world shortages in natural resources. As ecosystems, both are hugely productive in spite of, and in part because of the extreme temperatures they experience; certain species are found nowhere else and in fact thrive in these remote locales. Superimposed upon these natural environments is the presence of humans. Exploration of both areas has been particularly focused in the past century, with countless stories of the perseverance and persistence of our pioneering spirit. Initially surveyed to forward nationalistic agendas, both poles are now sites of scientific inquiry. In particular, the political model that currently governs Antarctica as one massive Protected Area has no precedent and perhaps suggests a way forward for environmental agendas working on global scales. More recently, the poles have been exploited by ecotourism businesses.</p> <p>This class examines the provinces of the Arctic and Antarctic, wildernesses whose boundaries can be defined physically, biologically, geologically and politically. We will examine the rich and highly adapted diversity of life as it is affected by local and global oceanography and atmospheric science, and assess the impacts of climate change on these fragile environments. We will also review our relationship with these places and examine what future we might play in preserving, and/or exploiting the polar regime, using Human Ecology as a model for our understanding. Evaluation will be by two term papers and participation in class activities.</p> <p>Level: Introductory. Prerequisites: None. Class limit: 15. Lab fee: \$50. Meets the following degree requirements: ES.</p>
B21B	HS	1064	College Seminar: Practical Skills in Community Development	<p>In rural areas throughout the world, citizens, nonprofit leaders, agency staff, and elected officials are coming together to frame complex issues and bring about change in local policy and practice. This course outlines the theory and practice of community development, drawing on the instructor's experience with the Dùthchas Project for sustainable community development in the Highlands and Islands of Scotland, Mount Desert Island Tomorrow, and other examples in the literature. In short, community development allows community members to frame issues, envision a preferred future, and carry out projects that move the community toward that preferred future. By using writing as process—prewriting, writing, and rewriting—to frame and communicate complex public issues, students gain practical skills in listening, designing effective meetings, facilitation, project planning and developing local policy. Readings, discussions, and guests introduce students to community development theory and practice. Class projects are connected to community issues on Mount Desert Island. By writing and revising short papers, students can reflect on class content, community meetings, newspaper stories, and reading assignments. Evaluation will be based on preparation for and participation in class discussion, several short papers, participation in field work, and contribution to a successful group project. This class meets the first-year writing course requirement.</p> <p>Level: Introductory. Prerequisites: None. Class limit: 12. Lab fee: None. Meets the following degree requirements: W HS</p>

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B21B	HS	3036	Oceans & Fishes: Readings in Environmental History	<p>This course will explore the rapidly expanding field of marine environmental history and historical studies that focus on fish and fisheries. Recent methodological and conceptual work as well as growing interest in the history of these topics driven by conservation and policy issues has made this an important and innovative field. Using the work of a variety of scholars from different fields the class will explore how historical accounts can be constructed with an emphasis on the types of available sources, the use of evidence, and how each author builds their argument. We will explicitly compare the methods, use of evidence and other aspects of different disciplinary approaches to the topic to highlight the strengths and limitations of each approach. This dimension of the class is particularly interesting because of the dynamic and interdisciplinary nature of scholarship right now that brings a wide range of research into dialogue. Students will learn about the history of oceans and fishes by looking at how historians and other scholars frame their works and make their arguments. Students will be evaluated on their preparation for discussion, mastery of the material, short written assignments, and a final project made up of a presentation and essay. This course is appropriate for students with interest in history, community-based research, marine studies, and environmental policy. Students who are just curious and interested in lots of things are also most welcome.</p> <p>Level: Intermediate. Class limit: 15 Lab Fee \$75.00 Meets the following degree requirements: HS HY</p>
B21B	HS	3062	Solutions	<p>We live in a world of problems . . . global warming, inequality, discrimination, child labor, slavery, waste, species extinction, domestic violence and a myriad of other issues occupy the headlines, courses and can feel overwhelming at times. Unfortunately, we rarely here about solutions, let alone have the opportunity to create our own solutions for the issues that concern us and inspire us to action.</p> <p>Changing the world takes more than a critical eye for what is wrong, proselytizing a good idea and hope. There are many factors which contribute to creating social change and in this course we explore what it takes to be a successful change maker in our communities, and thus in the world. Reversing the lens we use to approach the problems of the world is part of what a Human Ecologist needs to do to understand our challenges:</p> <p>“...social entrepreneurs are uniquely suited to make headway on problems that have resisted considerable money and intelligence. Where governments and traditional organizations look at problems from the outside, social entrepreneurs come to understand them intimately, from within.” -- David Bornstein, How To Change The World</p> <p>In this experiential, project-based course students will select a specific problem they would like to solve. Students will perform thorough research into a problem of their choosing, understanding it from within by identifying root causes and other exacerbating factors as well as investigating positive deviance and what people around the world are doing to solve this issue. Through these projects and other readings, students will examine a myriad of problems around the world and look at different strategies people are using to tackle them and create positive social change. The final project for the course will be a concrete proposal for solving the problem they selected. Students will be evaluated based on their performance, participation and the quality of the projects they produce over the course of the term.</p> <p>Level: Intermediate. Class limit: 15. Lab fee: \$50. Meets the following degree requirements: HS</p>

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B21B	HS	3098	On Questions of Rights, Responsibility, and Reparations	<p>This class examines concepts of rights, responsibility, and reparations in terms of questions about injustice. Over the course of the trimester, we will consider some of the ways these terms have been used in 20th and 21st century attempts to address the aftermath of intertwined histories of colonialism, slavery and capitalism. We will focus on examples that are different in terms of scale (e.g. institutions such as nation-states and schools, corporations, as well as individuals and groups, and the relations between them) , and which differ in terms of political, cultural, national, and historical context. The examples will be situated in relation to each other, not through comparison in terms of similarities and differences, but through historical and conceptual relation. We will examine examples from contexts that may include: South Africa’s Truth and Reconciliation Commission; Guatemala’s Commission for Historical Clarification; German Holocaust reparations and Israeli state formation; debates about and proposals for slavery reparations in the United States; College of the Atlantic’s efforts to reckon with its own histories, the controversy over the University of North Carolina’s “Silent Sam” confederate statue, and related discussions about how to “repair” and respond to the aftermaths of past wrongs, including debates over statues, the names of streets and buildings, the content and framing of school curriculums, and the relation between law and justice. This is an interdisciplinary course that draws from work in the Arts and Humanities, including in the fields and disciplines of postcolonial studies, literature, philosophy, history, feminist studies and cultural anthropology. Material will likely include texts by Hannah Arendt, Srinivas Aravamudan, Maoz Azaryahu, W.E.B. Du Bois, Roy L. Brooks, Tina Chanter, Ta-Nehisi Coates, J.M. Coetzee, Jacques Derrida, Euripides, Shoshana Felman, Sigmund Freud, Stuart Hall, Ranjana Khanna, Karl Marx, Chandra Mohanty, Jacques Rancière, Edward Said, Joan Scott, Hortense Spillers and Gayatri Spivak. Readings may include selections from Truth Commission reports and related documents, media articles, as well as fiction works including the play “ The Trojan Women,” the novel Disgrace and the films “Bridge Over the Wadi” and “Arna’s Children.” As we move through this material, we will consider questions about inheritance, capital, violence, choice, response, how an “individual” is understood in relation to group categories and contexts, and relations between politics and aesthetics. In doing so, we will address questions about and understandings of “freedom,” “reconciliation,” economic justice, difference and responsibility. Students will be evaluated based on class participation in seminar discussions, weekly reading responses, one short mid-term essay (3 pages) and one short final paper (5 pages).</p> <p>Level: Intermediate. Prerequisites: Open to all college levels, but students should have some prior coursework or background in engaging with some of the conceptual questions that inform this course, and be prepared for a heavy reading load. Permission required. Class limit: 15. Lab fee: None. Meets the following degree requirements: HS</p>
B21C	ES	1081	Plants and People: Economic Botany	<p>This class offers an introduction to plant biology centered around plants that are useful to human societies. We will explore plant anatomy, physiology, evolution, and ecology through case studies involving plants that are useful to humans. Through lectures, readings, and discussions, students will gain a rich understanding of how plants function and how human societies depend on them in myriad ways. We will cover universal and familiar uses of plants such as food, building materials, and textiles, as well as less widely practiced uses including arrow poisons, lacquers, and living fences. We will discuss the origins of agriculture and methods of plant breeding, as well as the biogeographical history of important cultivated plant lineages. The focus will be on plants and our uses for them, but we will also discuss ethical concerns surrounding practices like bioprospecting and ex situ conservation. Students will be evaluated on participation and the successful completion of two presentations and a research paper.</p> <p>Level: Introductory. Prerequisites: None. Lab fee: none. Class limit: 20. Meets the following degree requirements: ES</p>

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B21C	ES	1082	Climate/Seasons: Maple Production	<p>Through the lens of maple production, we will explore a variety of chemistry, biology, and climate science topics, including: climate, seasonality, plant physiology, density, (reverse) osmosis, and the chemistry of sugars. The hands-on aspects of these topics will be covered during an intensive 2-week period over spring break, which historically overlaps with the maple sap run in this area. Students will learn how to identify maple, birch, butternut and other tree species which produce viable sap for syrup production. Students will tap these trees, collect the sap, and concentrate it by reverse osmosis and by boiling. Students will also learn how to prune fruit trees, and why we do this in the same season. Students will be evaluated based on their participation in the 2-week spring-break session, as well as through assignments, papers, and a final project completed during the spring term.</p> <p>Level: Introductory. Prerequisites: Permission of Instructor. Class Limit: 6. Lab Fee: None.</p>
B21C	HS	1089	Worlds Beyond the Human: Multispecies Justice	<p>This course will explore the emergent discourses concerned with multispecies justice and the recognition of more-than-human communities. Students will engage with different approaches to these modes of environmental thinking, research, and writing in order to consider worlds beyond the human. This approach examines how the distinctions between nature/culture and human/nonhuman came into being and considers what kind of life is constituted, held accountable, and conserved. Amidst the rapid, yet often obscured, ecological changes happening around the globe, how are cultural, legal, and environmental justice narratives emerging which de-center the human and acknowledge the 'rights of nature'? Importantly, what are the potential limits to a multispecies or rights framework in a world where entire mountaintops are removed to continue legacies of extractive capitalism? Students will engage with literature and thinkers across a spectrum of approaches to more-than-human ethics including: new materialism, posthumanism, the growing global movement towards granting legal personhood for non-humans, and the cultures advocating for reciprocal rights and responsibilities to more-than-human communities. Course content will extend analysis beyond a multispecies and/or rights framework towards considering the agencies, sovereignties, and analytics of other-than-humans such as water, geologic formations, and even fungi. Overarchingly, the course will prompt students to articulate and write on the potentials of more-than-human ethics to assist equity outcomes for ecological and social communities during the Anthropocene. Assignments will include regular participation in class discussion, responses to colleagues' written posts, a series of short reflective essays, and a final project based on each student's own research interests, as it pertains to course content. Particular emphasis throughout the course will encourage students to demonstrate critical reading, speaking, and writing through synthesis of course content and class discussions.</p> <p>Level: Introductory. Prerequisites: None. Class Limit: 15. Lab Fee: None.</p>
B21C	HS	4079	Skills for Conflict Resolution and Advocacy on Human Rights	<p>The course provides students with skills and strategies for conflict resolution and advocacy on human rights and social justice issues. Students will practice leading focus groups, facilitating conflict resolution dialogues, conducting workshops and developing workshop agendas and curricula. Students will also explore strategies for effective advocacy by examining case studies from the instructor's work on human rights and social justice issues in Europe and the USA and from the work of other advocates. Advocates from Europe or the USA will present either in person or by Skype. Students may be able to observe active conflict resolution or advocacy projects in Maine during the term. Students will be evaluated on their work during practice sessions on conflict resolution and on other skills relating to advocacy on human rights issues, their written analysis of case studies, their final project and their participation in class discussion.</p> <p>Level: Intermediate/Advanced. Prerequisites: Coursework addressing conflict resolution or social justice advocacy, or significant experience in working on social justice and human rights issues recommended. Class limit: 16. Lab fee: \$25. Meets the following degree requirement: HS</p>

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B21C	HS	5022	Hatchery	<p>The Hatchery is applied Human Ecology in action; it offers students a bridge from coursework to actively creating their vision of the future. The Hatchery gives students from across the campus the opportunity to move from ideas to action. Hatchery students work either individually or in teams on a wide array of enterprises. Past projects have included: urban farming; international development; policy and planning; photography and film; alternative transportation; biofuel production; renewable energy; food systems; the arts; furniture production; technology development; social enterprise. Ventures have been for-profit and non-profit, encompassing the range from local businesses to scalable start-ups. Students selected for the Hatchery are required to devote an entire term to launching their venture. Each Hatchery enterprise, whether a team or an individual, must take the course for a minimum of three credits. Along with weekly instructional meetings, students receive office space, supplies, professional services, mentors and potential access to seed capital to develop their ventures. After the initial ten weeks of class, if students decide to continue their enterprises, they have access to the Hatchery space and resources for an additional nine months.</p> <p>The Hatchery takes place in three phases: --Application: Students apply for a position in the Hatchery over winter term. --Rapid Prototype: The ten weeks of the Hatchery course. Students create a rapid prototype to test their ventures in the marketplace. These prototypes vary widely depending on the type of ventures. --Creating an Enterprise Structure: During the ten weeks of the course, students will have weekly assignments that introduce key elements in an organizational structure and highlight operational considerations that are universal amongst enterprises. --Development: The following 9-months. Students have access to the Hatchery space and resources to continue developing their enterprises.</p> <p>Level: Advanced. Prerequisites: Permission of instructor. Class limit: 6. Lab fee: none.</p>
B21C	ES	4036	Wildlife Ecology	<p>This course is intended to complement the overall sequence of classes developed with a focus on the landscape and ecology of the Northeast Creek Watershed and is intended to provide students with practical skills in observation, data collection, analysis and presentation. It is particularly suitable for students wishing to pursue careers in field biology with federal or state agencies or land conservation NGOs. We will examine measures of distribution and abundance in animals and relate these to quantitative and qualitative measures of habitat complexity. Much of this class will be field based. Students will work in teams collecting data on vegetation structure and topography, trapping small mammals and estimating abundance through mark/re-capture techniques, radio telemetry and game cameras. Data will be analyzed using simple statistics including ANOVA, regression analysis, and means-separation tests. Spatial components will be included in an on-going GIS for the watershed region. Readings will come from a text and primary sources. Students should expect to spend significant amounts of time outside of formal class meetings in data collection, analysis and write-up. Assessment will be based on participation, a number of quizzes, and an end-of term team report/presentation.</p> <p>Level: Intermediate/Advanced. Prerequisites: Biology and Ecology. Critical Zone 1, GIS, Statistics strongly encouraged. Class limit: 10. Lab fee: \$50. Meets the following degree requirements: QR ES</p>

Semester	Department	Course	CourseName	Course Descriptions for Sustainability Inclusive Courses
B20Q	ES	2043	Interpreting Maine's Changing Landscape	<p>This course will examine the last 20,000 years of Maine's climate and human history. 20,000 years ago Maine was completely covered by the Laurentide Ice Sheet (LIS) rendering the landscape uninhabitable to plants and animals alike. Shortly following the recession of the LIS, humans entered the scene and for thousands of years modified the landscape to better suit their needs. With the arrival of European colonizers came great cultural and biological upheaval: the Great Dying of America's indigenous populations, introductions of invasive species, and novel agricultural practices. Through the lens of paleoecology, we will explore how Maine's biological, geological, and cultural landscapes have responded to perturbations through time.</p> <p>This course explores these changes within a place-based experience on a farm on Marsh Stream in Monroe, Maine. Topics for this course include past environmental change and ecological responses in species, populations, and ecosystem processes; common methods and proxies in paleoecological analyses; ecological principles applied to past organisms; paleohuman influences on the landscape; impacts of European colonization and the pristine myth; and the role of paleoecology in modern conservation efforts.</p> <p>The class will include weekly lectures, discussion sections, and labs. Labs will include collecting a sediment core, examining different proxies from that core (ie. charcoal, macrofossils, sediment type), identifying evidence of glaciation, examining forest succession, and mapping the historic agricultural landscape. Students will generate and analyze data for a collaborative original research paper and results will be written up in the form of a manuscript for publication.</p> <p>Students will be evaluated based on discussion leadership for two classes, a lab/field notebook and research updates (including group presentations), a collaborative, publishable-quality manuscript of all research findings, and a final outreach project to share the findings of the semester long study with the broader COA community.</p> <p>Level: Introductory/Intermediate. Prerequisites: Permission of instructor; co-enrollment in ES1072 Chemistry and Biology of Food and Drink, and ###. Class limit: 8. Lab fee: TBD.</p>
B20Q	ES	3090	Practicum in Sustainable Energy	<p>This is a hands-on, project-based class in which students will collaboratively plan for and participate in all aspects of renewable energy projects on College of the Atlantic's campus. Examples of projects include installation of a solar photovoltaic array, airsealing and insulating one of the college's buildings, or planning and installing a greenhouse heating system. Students will learn how to take a project from design through fruition while navigating the various phases of the project lifecycle including operation and maintenance. The course will begin with an overview of existing technology and an analysis of the current energy generation and consumption data for the project site(s). The class will then plan the project and present this plan to the community. As part of this planning process, students will learn about the economics of renewable energy systems, including return on investment (ROI), internal rate of return (IRR), and related quantities. Students who successfully complete this class will gain the skills necessary to conceptualize, plan for, finance, and implement renewable energy projects. Evaluation will be based on several short presentations, problem sets, and active and effective participation in all aspects of the project. Default grade is Credit/No Credit.</p> <p>Level: Intermediate. Pre-requisites: Permission of instructor; Physics and Mathematics of Sustainable Energy is strongly recommended. Class limit: 10. Lab Fee: \$50</p>

Semester	Department	Course	CourseName	Course Descriptions for Sustainability Inclusive Courses
B20Q	HS	1032	Acadia: Exploring the National Park Idea	<p>Using Acadia National Park as a case study, this course will explore the various facets of "the national park idea" and what it means for Americans in terms of history and identity. Through direct experiences in one of the "crown jewels" of the park system, the class will examine the historical, ecological, cultural, social, legal, economic, and spiritual context in which national parks are formed and continue to exist in the 21st century. We will work with National Park Service professionals to look at various aspects of park management and day-to-day challenges of implementing the "national park idea." Through weekly field trips, journaling, service learning opportunities, and projects, we will be immersed in the management and experience of Acadia. We will explore, through reading and writing, the broader themes of wilderness preservation, attitudes toward nature, the history of conservation, and the commodification of nature. This experiential class is specifically geared toward first-year students and they will be given preference for enrollment. Assignments will include journal writing, short exercises, a group project/service learning opportunity, short presentations, and papers.</p> <p>Level: Introductory. Prerequisites: none. Class limit: 24. Lab fee: \$40. Meets the following degree requirements: HS</p>
B20Q	HS	2102	The Social Life of Waste	<p>Waste is all around us, yet often nearly invisible. The US Environmental Protection Agency estimates that the average American generates over four pounds of waste each day. This course will look carefully at our discards, bringing them into focus as a wicked sustainability challenge, a source of value, and a cultural product. Students will critically engage with efforts and infrastructures to manage and reduce waste in the state of Maine and beyond. This course moves beyond critique, however, to focus on potential solutions to the waste problem. Our focus will be, as James Ferguson suggests, to think through "real strategies and tactics that would enable one to mobilize around specific programs or initiatives that one might be for, not against." Through readings, experiential learning, guest lectures, critical reflection, and discussions, students will explore (1) the scale and scope of the waste problem, (2) strategies for managing and reducing waste, and (3) the role of policy in addressing waste issues. This course will emphasize experiential learning. Students will visit sites where waste is processed and revalued to explore the benefits and barriers of these practices as solutions to the waste problem. Students will be evaluated based on their participation, as well as through short written assignments that emphasize critical reflection, synthesis, and translation of academic theories for broader policy audiences.</p> <p>Level: Introductory/Intermediate. Prerequisites: None. Class Limit: 15. Lab fee: none.</p>

Semester	Department	Course	CourseName	Course Descriptions for Sustainability Inclusive Courses
B20Q	HS	3023	International Wildlife Policy and Protected Areas	<p>"Save the whales"; "save the tiger"; "save the rainforest" - - increasingly wildlife and their habitats are the subject of international debate with many seeing wildlife as part of the common heritage of humankind. Wildlife does not recognize the political boundaries of national states and as a result purely national efforts to protect wildlife often fail when wildlife migrates beyond the jurisdiction of protection. This course focuses on two principle aspects of international wildlife conservation: 1) the framework of treaties and other international mechanisms set up to protect species; and 2) the system of protected areas established around the world to protect habitat. We begin with an examination of several seminal wildlife treaties such as the International Convention for the Regulation of Whaling, CITES, migratory bird treaties, and protocols to the Antarctica Treaty. Using case studies on some of the more notable wildlife campaigns, such as those involving whales and elephants, we seek to understand the tensions between national sovereignty and international conservation efforts. The Convention on Biological Diversity and its broad prescriptions for wildlife protection provide a central focus for our examination of future efforts. Following on one of the key provisions in the Convention on Biological Diversity, the second half of the course focuses on international and national efforts to create parks and other protected areas. In particular we evaluate efforts to create protected areas that serve the interests of wildlife and resident peoples. Students gain familiarity with UNESCO's Biosphere Reserve model and the IUCN's protected area classifications. We also examine in some depth the role that NGO's play in international conservation efforts. The relationship between conservation and sustainable development is a fundamental question throughout the course.</p> <p>Level: Intermediate. Recommended courses: Use and Abuse of Public Lands, Global Politics and Sustainability, Global Environmental Politics. Meets the following degree requirements: HS</p>
B20Q	HS	3035	Sustainable Strategies	<p>Business has tremendous societal ramifications. Inventions and industries from the automobile to the internet impact everything from air quality to economic and political freedom. Entrepreneurs, who are often at the forefront of business and thus societal innovation, are changing the way business is conducted by creating businesses that are beneficial to the bottom line, society and the environment. Through cases, projects and present day examples, the course will challenge students to understand the impact of business on society and the challenges and pitfalls of creating a socially responsible venture. In addition, it will offer new frameworks for creating entrepreneurial ventures that capitalize on social responsibility to gain competitive advantage, increase valuation while benefiting society and the environment. The final deliverable for the course is an in-class presentation in which student teams will either: (1) recommend ways to improve the social and environmental impacts of a company, while increasing competitive advantage and bottom line; or (2) benchmark two industry competitors, a socially responsible company versus a traditional company.</p> <p>Level: Intermediate. Class limit: 15.</p>

Semester	Department	Course	CourseName	Course Descriptions for Sustainability Inclusive Courses
B20Q	HS	4091	Comparative Global Politics of Biol. Diversity & Clim. Chng	<p>Climate change and biological diversity are prominent issues on the global political and environmental governance agendas and in public environmental consciousness. Each issue will be the focus of a major United Nations summit in 2020. Parties to the UN Convention on Biological Diversity will negotiate new post-2020 goals for halting biodiversity loss; parties to the UN Framework Convention on Climate Change will see the launch of new commitments and a framework for action under the Paris Agreement. Meanwhile, public narratives of the escalating and intersecting dual “crises” of climate change and biodiversity loss provide a broader context for questioning the role and effectiveness of intergovernmental treaty regimes in addressing these crises.</p> <p>This course will take a comparative and critical look at two multilateral treaty regimes: the UN Convention on Biological Diversity and the UN Framework Convention on Climate Change. Students will study legal characteristics of each of the treaties, how problems are defined and addressed within each, mechanisms used for implementation, and the governmental and non-governmental actors involved in the work of treaty implementation. We will also look at how these two treaty bodies work together to address issues at the intersection of climate change and biological diversity. Finally, we will spend some time in the course reading a range of theoretical perspectives and pondering larger political and philosophical questions: Are our current intergovernmental institutions up to the challenge of addressing these immense planetary challenges? What are the potentials of and limits to intergovernmental spaces and collective action that might we discern? What role might there be for non-governmental actors and social movements to contest and construct more effective regimes? How does a study of these regimes help us imagine what a global politics of the terrestrial might look like?</p> <p>Students will be evaluated based on their participation in class discussions, regular writing assignments reflecting on course readings, a presentation related to one of the treaty regimes, and a final synthetic essay that engages with topics covered during the term.</p> <p>Level: Intermediate/Advanced. Prerequisites: Permission of instructor. Class limit: 12. Lab fee: None. Meets the following degree requirements: HS</p>
B21B	ES	1056	Physics and Mathematics of Sustainable Energy	<p>In this course students will learn content and skills so that they can participate effectively in sustainable energy projects, make personal and community decisions that reduce carbon emissions, and work in ventures in sustainable energy. Additionally, this course will be useful for those interested in energy and climate policy, either internationally or domestically. We will begin with a quick overview of current CO2 emissions levels and look at how this is related to energy use. We will then turn our attention to basic ideas from physics, including the definition of energy and the difference between energy and power. The bulk of the course will consist of a survey of different forms of energy consumption and generation. Throughout, we will quantitatively analyze technology from both a local and global point of view. For example, we will calculate how much electricity one can generate on a rooftop, and we will also examine the role that solar PV could play toward the goal of eliminating fossil fuel use worldwide. In a unit on financial mathematics, students will learn about the time value of money and several ways of quantifying investments, including ROI (return on investment) and IRR (internal rate of return). Students will apply these financial tools in several short case studies. If time permits, we may also cover negative emissions technologies and the electrical grid, including grid stability issues and the potential of smart-grid technology. This will be a demanding, introductory, class. Evaluation will be based on weekly problem sets.</p> <p>Level: Introductory. Prerequisites: None. Class Limit: 30. Lab fee \$15.00 Meets the following degree requirements: QR ES</p>

Semester	Department	Course	CourseName	Course Descriptions for Sustainability Inclusive Courses
B21B	ES	3092	Environmental In/justice: Movements Arising from Ground Zero	<p>In this seminar, we will examine the history of environmental justice movements and will compare and contrast a series of past and current cases in both urban and rural settings, within and beyond the United States. In each, we will explore the patterns and processes giving rise to the uneven distribution of harm to human and non-human communities, and the remarkable strength and resilience of BIPOC communities in response to these harms. As women have often been the source of dissent and change, each case will interrogate the intersectionality of race, class, and gender. In the first half of the class, we will examine the concepts of race, environment, and justice through personal experiences and then reflect upon these within the context of readings, podcasts, and guest speakers. In the second half of the seminar, cases will be developed based on the students' location and will map the political, social and economic processes that deny the right to a safe environment and what are five different approaches that might support the necessary social and political transformation for environmental justice.</p> <p>Level: Intermediate. Prerequisites: 2nd year and higher, permission of instructor. Students should be prepared to engage with a diverse array of texts. One of the following courses would be helpful: Indigenous America, Climate Justice, Contemporary Artist as Researcher and Activist. Class limit: 12. Lab fee: none.</p>
B21B	HS	2087	Transforming Food Systems	<p>This course explores possibilities for transformative change across local and global food systems. The course centers on the questions: What would it take to ensure access to healthy, safe, affordable, culturally appropriate foods for all people? The first part of the course critically examines capitalist food systems with particular attention to the ways culture, politics, and economics shape our interactions with food. Through readings and exercises, we explore issues such as nutrition, worker safety, contested agricultural and land use policies, hunger, and environmental and community health. The second part of the course examines case studies of transformative food movements around the world, from the Zero Hunger programs in Belo Horizonte, Brazil, to La Via Campesina global campaign for agrarian reform. We focus particularly on food sovereignty and agroecology movements. The final third of the course focuses on transformative work in Maine and at COA. Students take multiple field trips to participate in local movements and to learn about their philosophies, objectives, and activities. By the end of the course, students will be able to analyze how power shapes food systems and articulate a theory of change for addressing a food systems problem of their choice. Students are evaluated based on participation in class discussions and field trips, a series of reflection papers, and a final project including a paper and an audio-visual presentation.</p> <p>Level: Introductory/Intermediate. Prerequisites: None. Class limit: 14. Lab fee: none. Meets the following degree requirements: HS</p>

Semester	Department	Course	CourseName	Course Descriptions for Sustainability Inclusive Courses
B21B	HS	2107	Indigeneous Peoples, Climate Change and Power	<p>This course introduces students to some of the critical environmental issues Indigenous peoples face in Maine and throughout North America due to climate change and environmental injustice. Students will explore theories of structural power and colonization, as well as case studies examining the legal recognition of Indigenous peoples, and their lands, by contemporary governments. These historical forces, and their effects on current environmental, political, and legal logics will be critically analyzed while also exploring various legal and political strategies applied by Indigenous nations as they adapt to climate change and participate in the global policy response to our changing climate. Students will have the opportunity to deepen their understanding of Traditional Ecological Knowledge (TEK) and Indigenous Science in relation to climate effects on natural resource conditions, as well as climate justice resistance and resilience movements. Through rethinking colonialism, the course will deconstruct contemporary issues of climate change while analyzing some of the ideological and structural logics that perpetuate environmental devastation, its disproportionate impacts on Indigenous peoples globally, and the local and Indigenous movements who are dynamically changing the narrative around resistance, justice, and knowledge. Students will be evaluated based on class participation, a series of synthesis papers, a student designed mini-ethnographic project, and a final research proposal and paper.</p> <p>Level: Introductory/Intermediate. Prerequisites: none. Class limit: 15. Lab fee: none.</p>
B21C	AD	3023	Sustainable Design in the Built Environment	<p>In the world of design and construction, green building is a relatively recent development. Its fundamental goal is to reduce the environmental impact of the built environment. This course will introduce the field of sustainable design, explore the fundamental concepts of green design and construction, and focus on tools and strategies necessary to design and construct high-performance buildings and communities. Students will discover how the practice of quality can fulfill the goals of sustainable design and construction. Evaluation will be based upon class participation, research presentation(s) and solution for a building design problem.</p> <p>Level: Intermediate. Prerequisites: Architectural Design Studio, Landscape Design Studio, construction or carpentry experience, any alternative energy course, or permission of either Isabel Mancinelli or the instructor. Class limit: 12. Lab fee: \$30.</p>
B21C	ES	1014	Gardens and Greenhouses: Theory/Practice of Organic Gardening	<p>This class offers a good foundation of knowledge for a gardener to begin the process of organic gardening, as well as an understanding of what defines organic gardening. The information presented focuses on soil fertility and stewardship, the ecology of garden plants, soil and insects, and practical management of the above. The garden is presented as a system of dynamic interactions. Emphasis is given to vegetable crops and soil fertility. Laboratories include soil analysis, tree pruning, seedling establishment, weed and insect identification, garden design, covercropping, composting, and reclamation of comfrey infested area. Evaluations are based on participation in class and lab, written class work, exam, and final individual garden design.</p> <p>Level: Introductory. Pre-requisite: Signature of Instructor. Class limit: 15. Lab fee: \$25. Meets the following degree requirements: ES</p>

Semester	Department	Course	CourseName	Course Descriptions for Sustainability Inclusive Courses
B21C	ES	3080	Environmental Chemistry	<p>This course is an introduction to the field of environmental chemistry, an exploration of chemicals and their reactivity/effect on the atmosphere, as well as aquatic and terrestrial ecosystems. Specifically, we will examine the sourcing, transport, and fate of specific chemicals in the context the following issues: air pollution, climate change, water pollution, hazardous organic compounds, soil health and waste disposal. Generally, environmental chemistry focuses on these two questions: 1) What is in the environment? and 2) What are the effects? The related question of how we design safer materials and products so that harmful chemicals don't end up in the environment in the first place is covered in the follow-up course, Green Chemistry. There are two classes per week, as well as a field-based laboratory section. Evaluation is based on participation in discussions, exams, and group laboratory reports.</p> <p>Level: Intermediate. Prerequisites: Chemistry I/II. Class limit: 12. Lab fee: \$100. Meets the following degree requirements: ES, QR</p>
B21C	HS	1054	Climate Justice	<p>Climate change is one of the biggest and most difficult challenges faced by contemporary societies. The challenge has multiple facets: environmental, social, political, economic – each with its own complexities. This course focuses primarily on the social, political and economic components of the climate problem, framed by the concept of climate justice. In the course students are introduced to basic conceptions of justice, the latest findings of climate science and the possible impacts on regional scales, and the global politics of climate change, principally in the context of the UN Framework Convention on Climate Change. Climate justice and its operationalization is the principal organizing theme for work over the term, addressing questions such as: how the costs of climate change impacts and efforts to address climate change could or should be distributed between rich and poor, global north and global south; and what are the possible means whereby those costs might be addressed through collective action at various levels: local, national, and global. Students will be evaluated based on regular quizzes, several short papers, class participation, and a final synthetic paper or project.</p> <p>Level: Introductory. Prerequisites: None. Class limit: 25. Lab fee: \$10. Meets the following requirements: HS</p>
B21C	HS	3026	Whitewater/W hitepaper: River Conservation and Recreation	<p>Loren Eisely once remarked, "If there is magic on this planet, it is contained in water." Eisely's observation is an underlying premise of this course - that there is something very special about moving water. This course is taught in a seminar format in which students will read and discuss ecological, historical, sociological, political and legal aspects of river conservation and watershed protection. Special emphasis is placed on understanding the policy issues surrounding dams, river protection, and watershed planning. In conjunction with readings and class discussions, students will use a term-long study of a local stream to learn about the threats facing rivers in the United States and the legal and policy mechanisms for addressing these threats. In addition, the class will take an extended field trip to western Massachusetts to gain first-hand knowledge of the tremendous impact river manipulation can have on a social and ecological landscape. We will spend time looking at historically industrialized and now nationally protected rivers in the region. Through weekly excursions on Maine rivers, students will also develop skills to enable them to paddle a tandem canoe in intermediate whitewater. Evaluation will be based on problem sets, role-playing exercises, contribution to the class, short essays, and paddling skills. Weekly excursions to area rivers entail special scheduling constraints as we will be in the field all day on Fridays.</p> <p>Level: Intermediate. Prerequisite: Signature of instructor. Class limit: 11. Lab fee: \$100.</p>

Semester	Department	Course	CourseName	Course Descriptions for Sustainability Inclusive Courses
B21C	HS	4026	Environmental Law and Policy	<p>his course provides an overview of environmental law and the role of law in shaping environmental policy. We examine, as background, the nature and scope of environmental, energy, and resource problems and evaluate the various legal mechanisms available to address those problems. The course attempts to have students critically analyze the role of law in setting and implementing environmental policy. We explore traditional common law remedies, procedural statutes such as the National Environmental Policy Act, intricate regulatory schemes, and market-based strategies that have been adopted to control pollution and protect natural resources. Students are exposed to a wide range of environmental law problems in order to appreciate both the advantages and limitations of law in this context. Special attention is given to policy debates currently underway and the use of the legal process to foster the development of a sustainable society in the United States. Students are required to complete four problem sets in which they apply legal principles to a given fact scenario.</p> <p>Level: Intermediate/Advanced. Prerequisites: Introduction to the Legal Process or Philosophy of the Constitution strongly recommended. Offered at least every other year. Class limit: 20. Lab fee \$10. Meets the following degree requirements: HS</p>
B21C	HS	5057	Active Optimism: Practices in Transforming Food Systems	<p>In "Beginning to End Hunger," M. Jahi Chappell quotes the Brazilian sociologist Herbert Jose "Betinho" de Souza, who said "I'm not some stupid optimist. I'm an active optimist." Chappell goes on to argue that active optimism—the notion that problems can be solved if we act on them with critical knowledge—is precisely what is needed to end hunger. This course will embrace the practice of active optimism by engaging students in place-based efforts to address food systems issues at COA. In this advanced course, students will form project teams and work collaboratively to build on on-going campus food systems initiatives. During week one of the course, students will select project teams and work with the instructor to develop a reading list and schedule tailored to the groups' needs. Thereafter, class time will be dedicated to discussing readings, developing and peer-reviewing research plans and materials, presenting progress-reports, collecting and analyzing data, and facilitating community input and outreach activities. Depending on their project, students may focus more or less on data collection and analysis, policy development, or program implementation. Students will be evaluated based on their participation (including self-directedness and professionalism), the quality of the processes and outputs of their projects, and their ability to work collaboratively with classmates and the campus-community (in particular, community-partners including COA's dining managers, farm managers, Food Systems Working Group, and the Cabinet).</p> <p>Level: Advanced. Prerequisites: Two previous courses in food systems, and permission of instructor. Class limit: 12. Lab fee: none. Meets the following degree requirements: HS</p>