

An aerial photograph of a wind farm situated in a lush, green forested area. The image is overlaid with a semi-transparent teal color. Several wind turbines are visible, with one in the foreground on the left and others in the distance. The text "Crash Course in Sustainable Development" is centered in a white, serif font.

Crash Course in Sustainable Development

Bard Graduate Programs
in Sustainability

Many of us share a deep sense that these next four decades represent the biggest challenge and the greatest opportunity for the global community to change the way we interact with our natural environment. There is a sustainability revolution occurring in our communities, in our schools, and in our businesses: more and more people want to step up and shoulder the responsibility of sustainable living. But what happens to all this passion and energy for a greener way of life? In most cases, it is wasted because of a lack of knowledge and leadership.

Here at Bard, our [Center for Environmental Policy](#) (CEP) is leading the change. Our graduate students are passionate, energized, smart leaders who are taking their concern for our global future and getting the education and experience they need in order to forge careers in sustainability.

In this digital guide, we invite you into a crash course in sustainability principles. Through these student stories from a trip to Oaxaca, Mexico, you'll get a glimpse of what you could learn in two weeks with Bard's Center for Environmental Policy, and you'll hear more about the education and skills you need to build a better and greener future.

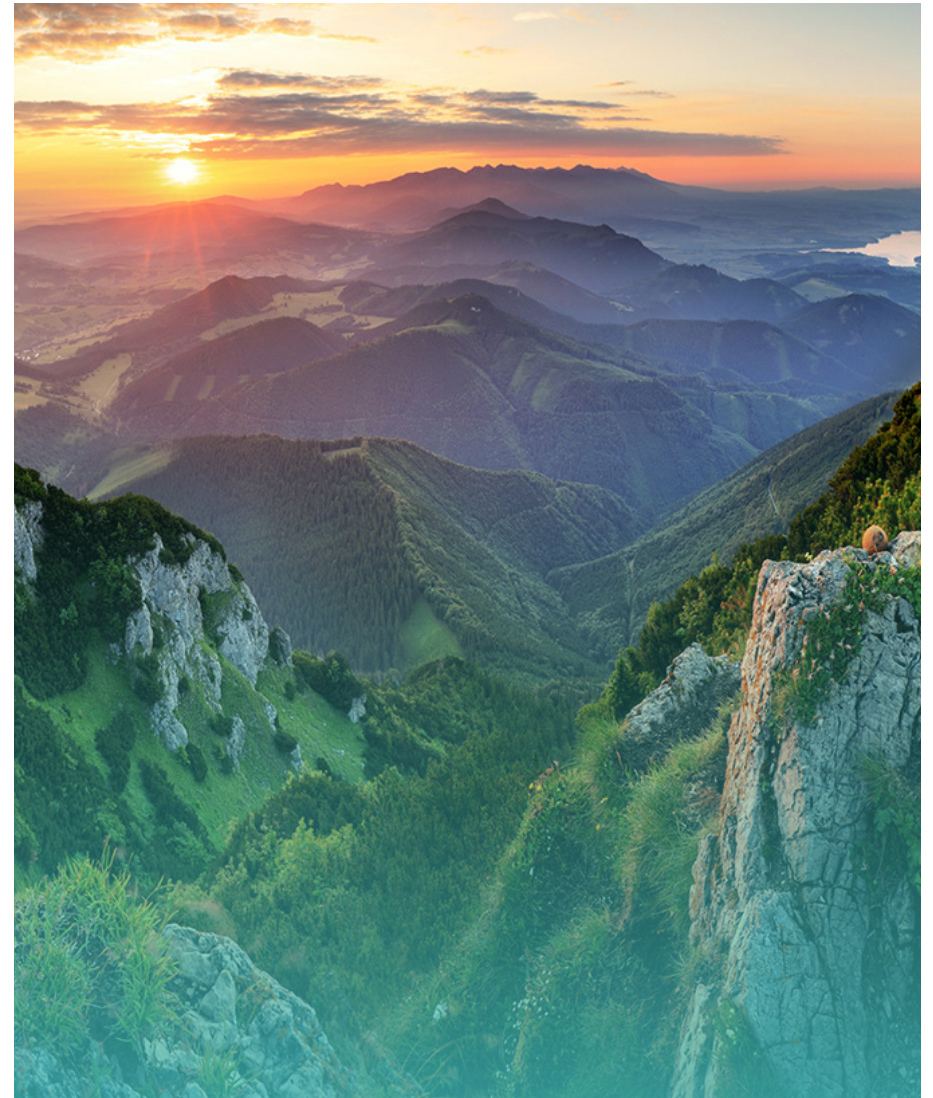


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About Bard's Center for Environmental Policy



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The [Bard Center for Environmental Policy's](#) graduate programs combine an intensive course of study with practical training in preparation for environmental careers in nonprofit organizations, government, and the private sector. The programs emphasize methods of critical inquiry and provide the practical knowledge necessary to understand the legal, political, socioeconomic, cultural, and ethical forces that influence the decision-making process around our toughest environmental challenges



Studying Sustainability through Experiential Learning



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Our Emphasis on Experience for Career Success

We know that sustainable leadership is best taught through a combination of theoretical and experiential learning. Sustainable development cannot be learned in the abstract.

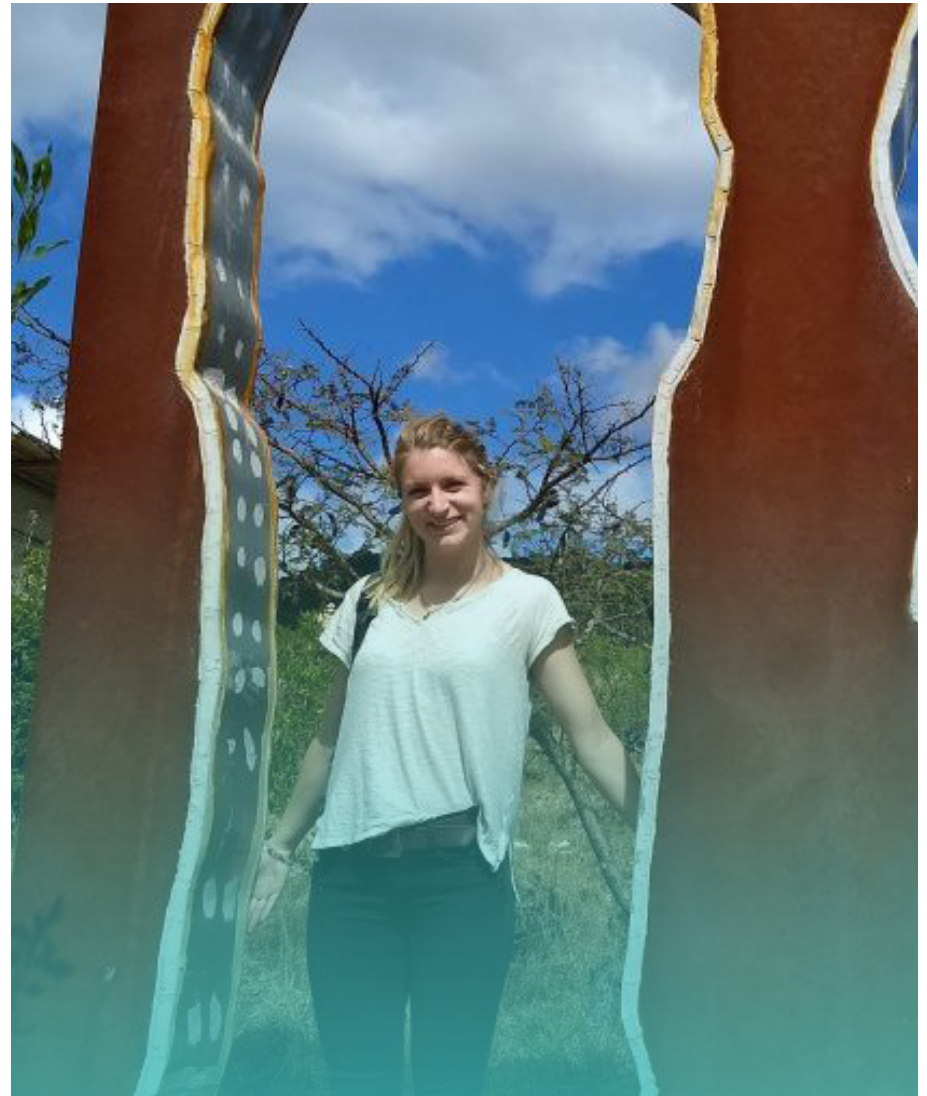
As part of the CEP programs, all M.S. students participate in a ten-day intensive course in January of their first year. During this faculty-led experience in Oaxaca, Mexico, students work with local NGOs to understand how food, energy and water policies affect local communities and how those policies evolve in the context of a developing country.

Our graduate students also complete high-level, extended professional internships as part of their masters program. From June to January of the second year, Bard graduate students are working for four to six months in South Africa, Geneva, Thailand, DC, New York, Texas, Alaska—wherever they find the most compelling policy work being done.

No other graduate programs in sustainability policy or education require internships at this scale.

This emphasis on experience helps our students be deeply interested in the beautiful, community-based solutions that can emerge when passion, practicality, and theory are combined.

Holly Kristner, a graduate student with Bard's Center for Environmental Policy, reflects on these themes in her story from Oaxaca, Mexico.



It's Not Just Adobe, It's Superadobe

By Holly Kristner

It's been two weeks since I returned from the Bard CEP field course on watershed management in Oaxaca, Mexico, and the trip feels surreal now. Surrounded by snow and preoccupied by schoolwork, sometimes I catch myself daydreaming about the beautiful Sierra Sur mountains, my favorite place from our journey.

We spent a busy two days in the Sierra Sur. We went to San Miguel Suchixtepec, the site of a WWF sustainable water project; visited the farming cooperative Rancho Alternativo; met some employees of Mbis Bin, a local organization dedicated to environmental education and supporting community members interested in implementing sustainable practices; and toured Tierra Blanca Coffee Cooperative. It was a wonderful whirlwind.

Amidst all that, some special moments stand out in particular.

When we arrived at Rancho Alternativo, we were invited to lunch in the half-finished superadobe house of Don Claudio, built in the clouds on a mountain slope. The cohort was excited – we had anticipated learning about the famed superadobe since we first heard about it. It's not just adobe, it's superadobe; honestly, it was probably something about the prefix 'super' that captured our enthusiasm.

Superadobe is a new technology for building houses. Many people are familiar with adobe houses, which are typically made of clay earth, straw, and pine resin. The typical home in Mexico is adobe.



Superadobe differs in that it is a mix of earth, water, and calcium carbonate. A long plastic bag is filled with the mixture and used to build a round house by stacking the bags and compacting them, layer upon layer. The superadobe house is affordable, does not require destructive extractive materials, and is structurally solid and able to withstand earthquakes. Well, we were enthralled. Our amazing guide, Sebastian, translated our questions about the materials, the architecture, the actual process of building, future plans for construction, and more... Don Claudio and his son, Romero, patiently answered all of them.

Someone asked, "Where does the earthen material come from?" As I listened to their response with my elementary Spanish, I thought that I misunderstood. But Sebastian translated and confirmed, "Right here." The builders had dug up and leveled the earth exactly where the house stands, to collect the materials to create the house itself. It doesn't get more local than that, but imagine how much work it took!

For such a simple structure, superadobe is superior to a traditional "house of material" (like concrete). While adobe houses do require more labor, hiring people to help with construction keeps money in the community compared to "modern" homes, which use expensive materials and whose construction ultimately benefits distant large businesses.

It's funny that, of all the amazing projects we learned about, this superadobe home made such a lasting impression on me. Since being back at Bard, I've realized that I love superadobe for more than the 'super' prefix—it's simple, socially and environmentally sustainable, as well as beautiful and strong. All our solutions should strive for that.



Small Business Strategies for Sustainability

Written by: Brett Landau

The state of Oaxaca, Mexico might not be the first place I think of when I am considering innovative sustainability strategies, but, as the Bard CEP class of 2019 found out, it's full of surprises. One such surprise was Rancho Alternativo, a small business run by an indigenous family in the Sierra Sur mountains.

Here we saw practices such as superadobe, dry toilets, a pine nursery, milpa crops, worm composting, drip irrigation for tomatoes, and an earthen dam. We started the afternoon with lunch in a superadobe home under construction. Superadobe is made from compacted earth, calcium carbonate, and water, all of which are locally sourced. Houses are then painted white with a mixture of cactus resin and calcium carbonate to reflect the sun's rays and keep them at a consistent temperature. The cost of materials is cheap and local, but labor is costly. The ranch gets laborers from the community, helping the local economy by distributing wealth to local families.

We then took a closer look at the ranch's farming operations. The family focuses on milpa, a technique of seasonally growing corn, beans, and squash. The ranch's milpa crop is fully organic because the family uses biofertilizer, microorganisms, bokashi compost, and applied minerals. We also examined the drip irrigation in the tomato greenhouse, which allows more precise water use and reduces wasted water. The tomatoes are grown with the same organic components as the milpa.

Lastly, we took a short walk through thick brush to the small earthen dam built to contain water for the ranch. This dam allows the ranch to be self-sustaining, instead of having to rely on water from the community. Not only does this help in a small way to alleviate regional water scarcity, but it also provides the ranch with an asset that makes it more resilient.

At the end of the trip, our group sat on the platform that served as part of the roof of the superadobe house and waited for the collectivos to pick us up. The view from the roof was breathtaking, and we watched the clouds move slowly across the valley between lush, green mountain sides. I realized that the platform could very well have been built for the same purpose that drives the sustainability practices of the ranch: the love of nature.

Are you reading to help lead the change?

Studying Sustainability in Interdisciplinary Way



3

Bard's Unique Core Curriculum

Bard's graduate sustainability programs feature a unique, integrated first-year core curriculum. Most policy and education programs are "cafeteria style," in which students cobble together a collection of classes from a list of dozens of options over two years of residence, but this scattershot approach can waste students' time. By contrast, Bard condenses most of the academics into a carefully curated first-year core curriculum that provides all of the tools needed for professional success during the extended professional internship in the second year.

This also allows for interdisciplinary learning across our three degree programs. While our graduate students eventually specialize in either Environmental Policy, Climate Science and Policy, and Environmental Education, much of their foundational learning is shared. This approach strengthens our students' connections with each other and allows for greater insight as each student brings his or her individual interests to the shared experience. Our small class sizes and highly engaged faculty also provide every student with the personalized tools and learning they need to succeed in a sustainability career.

The key reason we take this interdisciplinary approach to environmental issues? **Because the best solutions to environmental challenges are multi-faceted and take into account the best interests of the natural world, the local community, and global social justice.**



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The Impact Report, for stories from the
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Studying Sustainability at Every Scale



4

Our Emphasis on Local to Global

Thinking about global challenges while solving problems at the local level is a key part of a successful career in sustainability. Graduate students in the Center for Environmental Policy at Bard are involved in local projects in the Hudson Valley throughout their years of study, and experiences like the annual trip to Oaxaca and internships with international NGOs help provide a global perspective.

A global perspective is crucial not only because our environmental crisis is global, but because many solutions can come from taking the example of techniques pioneered in other parts of the globe and using them to tackle local challenges.



Studying Sustainability in a Network



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Building Trust and Relationships in Order to Succeed

If you're passionate about the environment and have wondered how you can contribute or pursue a career in sustainability, you need to work within the context of a network. Finding a career in the sustainability space requires that each student build a strong professional network. This network starts with the close connections formed with fellow students and faculty and alums. It grows with the constant flow of sustainability professionals who visit Bard, the trips to learn from other communities, and the opportunity to work face-to-face with organizations in our extended professional internships. Because of this emphasis on network building, Bard's graduate students have remarkably strong success in the job market and in sustainability careers. One of our recent studies showed that over 92% of Bard M.S. graduates are working in jobs with a social or environmental mission, or are pursuing further graduate study. In a typical year, close to 40% of students that graduate from Bard CEP are already employed, primarily as a result of job offers arising from the professional internship.

After the trip to Oaxaca, Casey Hughes, a student in the Bard Center for Environmental Policy, reflected on the crucial importance of building a sense of community in order to meet environmental goals.



Community Conservation in Oaxaca: San Pablo Etna and La Mesita

By Casey Hughes

After the trip to Oaxaca, Casey Hughes, student in the Bard Center for Environmental Policy, reflected on the crucial importance of building a sense of community in order to meet environmental goals.

What do coastal resort towns and mountainous coffee farms have in common with peri-urban Oaxaca? Other than places visited by Bard CEP during our time in Mexico this January, they are home to communities that recognize the value of nature and natural spaces and are working at the local level to preserve them.

A short van ride into the hills surrounding Oaxaca City is the community of San Pablo Etna. Thirty years ago, San Pablo Etna decided that it was in its best interest to cease natural resource extraction in the form of logging and begin reforestation and other environmental practices. It simultaneously began to develop La Mesita, a site for both conservation and environmental education.



Under a communal land ownership structure known as *usos y costumbres*, the pine-oak forests of San Pablo ETLA are visibly different from those of neighboring communities that have allowed logging to continue. In those communities, ongoing natural resource extraction has led to two problematic outcomes: first, a “survival of the worst” trees due to high grading, and second, a high-level distrust of outsiders due to bioprospecting.

As part of our tour of La Mesita, our group met with Dr. John Williams, who is currently studying the local forests to monitor their biomass. According to him, members of the community are particularly interested in evaluating the current and potential carbon storage of the area to use for payment for ecosystem services systems. This could help the community recover the lost income stream from logging, and it is one of the ways in which John was able overcome misgivings about his research.

The process of gaining a community’s trust as part of the scientific research process has also been a large part of entomologist Dr. Alfonsina Arriaga Jiménez’s work. During her study of biodiversity in the area, she has built considerable relationships with communities. She not only engages them in the process through educational materials and presentations, but also convinces them that she is really only interested in the dung beetles (an indicator species), without a hidden agenda for developers. Further connecting biodiversity and conservation to community, she told us the story of a group of girls in another indigenous community who’ve named themselves after the indigenous name for a local species of bird that has gone extinct within the last generation.

These ideas culminate in La Mesita, the most public part of San Pablo ETLA’s conservation area. There, community members, people from the city, and tourists come and learn about conservation and the environment. The site has many demonstrative and artistic features on this theme, ranging from a tree and plant nursery, to a water filtration system, to an impressive collection of agave varieties, to sculptures by local artists.

The land itself of La Mesita is a testament to the community’s environmental management; once eroded and barren, it is now a landscape that reflects the values and commitment of the people who care for it.

Interested in growing your sustainability leadership skills?

Understanding the 3 Approaches to Sustainable Learning



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Degrees in Environmental Policy, Climate Science and Policy, and Environmental Education

Bard's Center for Environmental Policy master's programs have many crucial features in common. These include:

- Integrated, interdisciplinary curriculum
- Unmatched interaction with exceptional faculty
- High-level, extended professional internship
- Global and Local engagement, including a Peace Corps option
- Research opportunities designed to meet student interests
- Strong career development, mentoring and placement
- One-year residency option

However, students do get to hone in on an area of particular strength and interest by choosing between a degree in Environmental Policy, Climate Science and Policy, or Environmental Education.

MASTERS IN ENVIRONMENTAL POLICY

This program links natural ecosystems and their functioning to the impact of socioeconomic activities, and to the political, institutional, and legislative responses that address environmental problems. For individuals who want to “change the rules,” this program’s emphasis gives students the knowledge they need to fight bad laws, regulations, and policies set by government and businesses, and replace them with good ones.

Our graduate students with a masters in [environmental policy](#) are equipped to craft policy and interface between legislative and institutional influences and changing environmental conditions that demand a thoughtful response.

MASTERS IN CLIMATE SCIENCE AND POLICY

This [climate and science](#) focused degree covers the interplay between climate systems, ecosystems, and agricultural systems on the one hand and solutions on the other, training future policy leaders to guide efforts in greenhouse gas mitigation and adaptation. The curriculum incorporates science, economics, policy, law, and tools of analysis.

This course of study equips aspiring environmentalists with the analytical, communication, and problem-solving skills they need to connect core scientific principles to socioeconomic impacts, infrastructure investment, and political and legislative responses to global climate change.

MASTERS IN ENVIRONMENTAL EDUCATION

Bard’s [M.Ed. in Environmental Education](#) prepares educators to create an informed and engaged citizenry supporting progress towards a just, prosperous, and sustainable future.

The future needs people who can integrate teaching and communication skills with passion and knowledge of environmental science. The purpose of this degree is to prepare sustainability leaders to pursue successful, high-impact careers in private schools, NGO’s, government land management agencies, private land conservation organizations, museums, environmental education centers, and consulting firms.

We all know that education, arming people with knowledge about the realities of environmental threats and showing them sustainable practices, is a crucial part of our efforts to change the world. Our graduate students with a master’s in Environmental Education can fill these crucial roles, for both the old and the young.

Closing Thoughts



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Successful sustainability efforts will require all of us to recommit our energy and efforts to global transformation. If you are considering a career in sustainability or know you want to learn more about how to leave the earth greener and better than you found it, Bard's Center for Environmental Policy is leading the change.

Through theoretical and experiential learning, through a strong interdisciplinary curriculum, through an emphasis on local and global efforts, and through strong network-building relationships, Bard is educating the leaders of tomorrow.

**Connect with us today
to stay in touch and
learn more!**

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