Developing a Sustainability Ethos at Winona State University

When Winona State University signed the American College and University Presidents’ Climate Commitment in 2007, the university undertook a series of initiatives to reduce the campus’s environmental footprint. Divisions from across the southern Minnesota university—purchasing, facilities, dining, transportation—worked to implement more sustainable practices. But there was one area of campus that did not initially develop any clear goals—academics. “As a university, that’s our primary goal, to educate our students about whatever we do, and since we signed a climate commitment, we owe it our students to teach them about how we can make this happen and how they can do this in their own lives,” says Jeanne Franz, a professor of chemistry.

Franz was one of several faculty members who spearheaded the creation of the sustainability minor at Winona State. Launched in 2011, the sustainability minor draws courses from more than a dozen departments and can be paired with any academic major. The goal of the minor, Franz says, is to help students “understand the complicated nature of living sustainability in society, and the interdisciplinary nature of achieving that goal.”

Building an Inclusive Curriculum

A large working group was formed to discuss the possibility of a sustainability minor, and from that group a smaller committee of faculty from a broad range of disciplines was selected to begin planning the program’s curriculum. The committee strongly believed that the curriculum should be highly interdisciplinary, both to offer a broad education in issues related to sustainability and to attract students with diverse interests. Such a curriculum would require a wide pool of courses—and, therefore, widespread faculty buy-in. Franz attended a workshop at Emory University on incorporating sustainability across the curriculum, and then held her own workshop for faculty at Winona State. About thirty-five faculty members from a range of academic departments attended Franz’s two-day workshop, and many began retooling their courses accordingly. Faculty could then submit their revised syllabi to the curriculum committee, which had discretion to select which courses could be included in the sustainability minor.

Faculty did not necessarily have to completely redesign courses in order to make them eligible for inclusion in the sustainability minor. To secure support from across the university, it was important to allow faculty to have freedom to decide whether or how they would participate, says Peggy Sannerud, a professor of theatre arts. No music or visual arts faculty offer courses with a sustainability focus, but those departments did create provisions for students to design independent studies that may be counted toward the minor.
In other cases, faculty made small adjustments to their existing courses to introduce a sustainability focus. One mathematics instructor adjusted her sections of pre-calculus by rewriting all the word problems to address sustainability issues. Several sections of first-year writing have adopted readings and writing prompts that address sustainability. Mathematics in particular can seem highly abstract to students, Franz says, so grounding the subject in real-world issues is useful from a teaching and learning perspective. Addressing sustainability in these courses also allows more students to participate in the minor, according to Bruno Borsari, a professor of biology, because the courses have no prerequisites and also fulfill general education requirements. These sections address the same general education learning outcomes as the sections that aren’t focused on sustainability, and the students enrolled in them may or may not be completing the minor.

An Interdisciplinary Core

All students enrolled in the minor must complete a six-course core curriculum. “We used that core set of courses to give students a chance to develop a sustainability ethos,” Franz says, and to introduce students to both micro and macro perspectives on sustainable living. An applied chemistry course focuses on practical, day-to-day issues ranging from composting to renewable energy, while a geoscience course addresses big-picture issues like climate change and water use. A biology course and a sustainability-themed composition course provide additional background, while a course from the Department of Recreation, Tourism and Therapeutic Recreation focuses on environmental stewardship. Finally, students take either a philosophy course addressing environmental ethics or a political science course on environmental policy.

Students also select two more elective courses focusing either on science or the humanities and social sciences. While the intent was always to make the minor as interdisciplinary as possible, Franz and her colleagues were pleasantly surprised at the diversity of student majors represented in the minor. “As a chemist, I tend to see it from a science perspective, and we were concerned we get would get just science majors, but we draw from across campus.” There’s a similar diversity reflected in the course offerings: twenty-one elective courses are offered in the science track, and thirty-three are offered in the humanities and social sciences track.

“I think this is largely what makes us unique,” Sannerud says. “We’re so whole-heartedly liberal arts oriented. We believe there’s a cultural shift that needs to occur to make climate change issues come forward in our culture and society. We can address problems through the arts—as we always have through time.” In addition to teaching about the social impact of the arts in her general theater courses, Sannerud also incorporates sustainability issues in her technical theater courses.
“We talk about construction techniques involving metal work, plastics, or lumber, and the give and take of each. They know, ‘I can use this material, but one of the outcomes is the release of toxic gas’—they internalize that into their thinking.”

The sustainability minor is housed in the department of professional studies, while credit hours for the courses are assigned to the departments of the faculty members who teach each course—a provision that was necessary to secure widespread support. With coursework spread across so many different departments, providing a coherent experience for students can be a challenge. Unlike other minors, the sustainability minor requires students to have a minor advisor to help them think critically about their selections and draw connections between different courses. Having a required English course is also helpful, Sannerud says, as the writing assignments require students to draw together different aspects of sustainability.

**Sustainability in the Cocurriculum**

The cocurricular events and programs that preceded the sustainability minor remain an important supplement to the academic courses. One crucial source of programming is the university’s Lyceum Committee, which sets a theme for each academic year and invites a series of speakers to address that theme. Students, faculty, and staff also put together a variety of other events related to the year’s theme. A number of recent themes have focused on topics related to environmental sustainability, including sustainable food, water usage, and home and place. Sponsored lectures give students the chance to interact with scholars and authors working on relevant issues—such as *Tomatoland* author Barry Estabrook, an outspoken critic of industrial agriculture—and may also draw in students who aren’t enrolled in the minor.

The university has also launched a number of community partnerships with a sustainability focus. Several professors work with local farmers, including Borsari, who takes his biology students to a local farm that used to provide some of the food for Winona State’s dining services and continues to recycle the university’s food waste. Other students have worked on adapting a former landfill into a park and community garden, and on reclaiming a local park along the Mississippi River bluffs that had been overgrown by invasive plants. Because the bluffs are a local landmark and tourist attraction, the students made not only an ecological but also an economic impact through their work. This application of knowledge is extremely valuable, Borsari says, and it’s particularly important for teaching sustainability. “If you can involve the students in a meaningful outdoor experience or hands-on approach to learning, that is what will remain much longer.”

One group of students gets hands-on experience with sustainable living through their residence in the sustainability house. The ten students living in the sustainability house are selected through a competitive application process each year and receive one academic credit. Residents pledge to make a conscious effort to live in an environmentally responsible manner and also serve as hosts for tours of the house and leaders of sustainability programming for the campus and the greater Winona community. Some of the students who live there are sustainability minors, but not all. “It’s been a good place to get student leaders,” Franz says.
Leadership at all levels—from students all the way up to faculty and administrators—has been crucial to implementing the minor and influencing the campus climate for sustainability, Franz says. “You have to get colleagues from across campus … and don’t get stymied by the boxes that are sometimes present at a university—this has to be an interdisciplinary issue.”

Borsari agrees. “It’s easier to operate in our separate camps, but sustainability demands this open-mindedness,” he says. “We have to be as fearless as we were when we were freshmen, before our minds were made up.”

More information about the sustainability minor and other programs on campus are available at the Winona State University sustainability webpage. More information and resources on sustainability in higher education are available through the AAC&U and Project Kaleidoscope initiative: Sustainability Improves Student Learning in STEM. 

Mobilizing STEM: http://mobilizingstem.wceruw.org/

ABOVE ARTICLE URL: http://www.aacu.org/aacu_news/aacunews13/november13/feature.cfm