

Ten Ways to Integrate Sustainability into the Curriculum

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Those of us in higher education who are concerned about the future of the planet realize that although cutting carbon emissions from campus operations is important, it is not enough to turn the tide of the ecological crisis, nor is it where we can best utilize our influence as educators to make an impact on future generations. Integrating sustainability into the curriculum is becoming THE challenge for sustainability influencers at colleges and universities as green buildings and recycling programs become matter of course and the classroom becomes the true battleground for change. Here are some ways that sustainability can be integrated into the curriculum to help build ecological awareness for students, staff, and faculty.

1. Use the campus as a laboratory. One of the tenets of sustainability education is that students should practice doing as well as reading. By making learning hands-on, students' understanding of sustainability concepts becomes three dimensional, tactile, and more memorable. The university campus is a wonderful place to apply sustainability practices learned in the classroom. There are so many sustainability practices that can be done at a university campus that can also be applied in the home, a business, organization, or a municipality.

Utilizing a consulting model, the instructor can act as intermediary between the students and a "client," a staff person or other employee for whom the work is done. Having students produce the university's greenhouse gas inventory is a good, manageable project that will advance campus sustainability. Students have also produced entire climate action plans for their universities. Other projects might include creating a plan to implement composting or storm water management. At Dickinson College, students utilize chemistry skills to produce biodiesel from waste cooking oil in the biodiesel shop. If your campus has some land, starting farm is a great way to teach a variety of skills and build connections to the community. The engineering minded might study the potential for solar energy installations. A psychology class could conduct a survey of environmental attitudes on campus. A communications class could design a sustainability outreach campaign, and an art class could design visuals to enhance sustainability communication on campus. The possibilities are numerous.

To maximize student learning and the value of these projects to the university, staff and faculty must be committed to coaching and assisting students. A scope of work has to be defined that can be done by a few students in one semester and that is not too urgent. Communicating expectations is important so that students don't produce something that misses an essential element and ends up being useless to the college. You also want to make sure that the work is documented and made available so that future students don't have to reinvent the wheel. Supervising a student project may be more time consuming than having staff complete the work, but done right, it is a great educational opportunity.

2. Set up an eco-rep program. We all know how an ecorep program is a great way to engage students on sustainability and spread outreach in the student population through peer-to-peer education. These paid or volunteer sustainability enthusiasts can help drive participation in dorm energy contests, recycling contests, sustainability events, monitor sustainability behavior, and be ambassadors of the school's sustainability program. I learned a lot about eco-reps through my friend Josh Stoffel, sustainability coordinator at Connecticut College, who started an ecorep program at University of Massachusetts Amherst while he was still a student. But the brilliant thing he did was that he enabled students to earn academic credit as eco-reps. To do so he negotiated with the environmental studies department to create a 1 credit course that he co-taught with a faculty member. Each week, students read material and attended a lecture about a sustainability topic. They wrote 1-2 page reflection papers based on the readings and also completed action items that assisted with sustainability outreach for the university, such as conducting workshops in residence halls, creating and putting up posters, and tabling at events. This combination of theoretical learning and action powerfully enhanced students' learning, giving context to sustainability topics and a vehicle for them to create change on their own campus.

3. Take advantage of independent study. Sometimes students will have an interest in a subject not covered by the curriculum or have an idea that cannot be implemented in a class. Take advantage of independent study as a vehicle to nurture these students. Students can also conduct independent study in a group. The work might involve a campus sustainability project, a reading list, a research inquiry, or a creative project. An independent study is also a good way to follow up on a summer project. In the summer of 2009 I traveled to several ecovillages and earned credit through independent study in the following year by writing a book about my experiences. Independent study is also a great way to conduct interdisciplinary study, bridging the student's interest in environmental studies with the arts, humanities, or social sciences.

4. Require/give credit for internships. Many universities allow, sometimes require, students do internships to complete their major. During the summer, exciting internship opportunities abound for students interested in environmental studies. During the school year, students could consider internship credit with the Sustainability Office or Facilities Department on campus or a local environmental organization. Because being in the outdoors and performing service are great ways to spend the summer, environmental internships appeal to students from all kinds of backgrounds, not just those majoring in environmental studies. Work with your Career Services Office to broadcast opportunities widely and you can integrate life changing sustainability education into the experience of many students who otherwise might not encounter it in their course of study.

5. Go on field trips. Seeing is believing and students may remember a field trip to the local recycling plant long after they have forgotten the written material from the class. Some professors go all out and take their students abroad for a week long field trip with multiple destinations. At Dickinson College, a module on climate change had students flying to South Africa to attend the UN Convention on Climate Change where students interviewed delegates and performed community service. International trips require extensive planning, but short, local trips can be just as impactful. I know a professor at Swarthmore College who took his students to see mountain top removal in West Virginia in one of his courses. His students were so outraged

and inspired by what they saw that they started a fossil fuel divestment campaign that was recently featured in the New York Times. I remember when my Greening Business Management class at the Yale School of Forestry and Environmental Studies took our class to the factory of Stoneyfield Farm in Vermont where we learned about organic yogurt production. The experience was preceded by reading Stoneyfield CEO Gary Hirshberg's book, *Stirring It Up*, and a visit with Gary Hirshberg himself. It opened my eyes to what was possible in the intersection of business and sustainability. One of my classmates that semester even went on to become the Carbon Manager at Stoneyfield Farm.

The benefits of field trips are not limited to students. Facilities Managers, staff, and faculty can also benefit from field trips to learn about what other campuses are doing for sustainability or what is going on in the community. It may be just the thing to convince skeptical or apathetic managers to take action to support sustainability at their own campus.

6. Attend a conference. What better way is there to learn the latest developments in the field and network with professionals than to go to a conference? It's a terrific opportunity to take students out of the academic setting and into the real world where they can meet people who are doing work in real time. Even better is to have students submit a proposal and present a paper at a conference. Students can usually get a discount on the admission rate. AASHE, Greenbuild, NetImpact, EcoSummit are a few conferences that come to mind, but there's a conference for virtually every environmental issue.

If you have a faculty or staff member who is on the fence about sustainability, inviting them to attend a conference may be a non-threatening way to get them some education and inspiration. One professor I know who had been sent to a conference with no strings attached came back so enthusiastic about sustainability that she created proposals for two new courses integrating sustainability into the humanities. She then made presentations to other faculty inspiring them to do the same.

Schools can also organize their own Environmental Conference. Towson University near Baltimore, Maryland will be hosting its 5th annual Environmental Conference this spring. The one day event will feature a keynote speaker, presentations and panels on different environmental issues, opportunities for students to present research, and a networking fair with representatives from local environmental businesses and institutions. You can also look at the calendars of nearby schools and at the municipality. Many cities and towns hold Earth Day fairs that the whole community participates in.

7. Invite speakers. In addition to taking students out into the field, you can also bring practitioners into the classroom. At the Yale School of Forestry and Environmental Studies, sometimes entire courses are taught by visiting practitioners. A class on environmental campaigns had a different speaker every week including leaders from Greenpeace, Forest Alliance, and the Chesapeake Bay Foundation. A course on urban planning had speakers who were architects, planners, government administrators, and the New York Metropolitan Transportation Authority president. These speakers gave us such a glimpse of sustainability in action and a chance to be inspired by people whose careers matched our aspirations. Get more

mileage from speakers by arranging for them to speak at a public event at the university as well as more intimately with just your class.

8. Utilize the sustainability officer and other staff. The sustainability officer of the university is not only someone who can implement sustainability in campus operations, but he/she is also a knowledgeable professional with real world experience who can be called on to work in the classroom. At some schools, the sustainability director teaches a freshman seminar to introduce students to sustainability. Some schools have the sustainability director co-teach Intro to Environmental Studies or the Senior Capstone Seminar with a faculty member. Similarly, sustainability officers can be called on to give presentations, conduct orientation, or lead workshops on sustainability to raise awareness among students, faculty, and staff.

9. Encourage study abroad. A semester or year abroad studying sustainability is a life changing experience. Schools with resources can consider sending their faculty abroad to lead research and teaching in environmental studies at an exotic location. Swarthmore College teamed up with Pomona College and Macalester College to offer a study abroad program in Globalization and the Natural Environment in collaboration with the University of Capetown in South Africa. If the school cannot start its own program, it can allow students to earn academic credit by studying abroad at other universities. At Smith College, students are able to get Smith credit AND financial aid to study abroad at universities all over the world without having the program be directly administered by Smith. Find environmental studies programs at other universities and see if your school would allow students to earn academic credit by studying abroad. In addition, organizations like [Living Routes](#) take college students to ecovillages around the world to learn about sustainability and permaculture.

10. Develop faculty. Many faculty are interested in sustainability but don't know where to start with integrating them into their courses. They don't have to reinvent the wheel and they don't have to do it alone. By organizing a faculty development workshop, you can invite faculty from other universities who have experience teaching sustainability in their disciplines to come teach your faculty. The [Piedmont Project](#) and the [Ponderosa Project](#) are early models of faculty workshops that have inspired similar gatherings at other universities. Conducted in a retreat setting, these workshops can be a vital time for reflection and discussion about the curriculum.

Finally, here are a few books about sustainability and education:

Orr, David. *Earth in Mind: On Education, Environment, and the Human Prospect*. 2004.

Rappaport, Anna. *Degrees that Matter: Climate Change and the University*. 2007.

Bardaglio, Peter. *Boldly Sustainable: Hope and Opportunity for Higher Education in the Age of Climate Change*. 2009.

Timpson, William. *147 Practical Tips for Teaching Sustainability: Connecting the Environment, the Economy, Society*. 2006.

Blewitt, John. *The Sustainability Curriculum: The Challenge for Higher Education*. 2004.