As the sun goes down over the College of the Atlantic, the cafeteria gets dimmer and dimmer. But only when it is nearly impossible to see the food does a student, finally, get up and turn on the lights — prompting a collective groan at this wanton use of energy. Another adjusts the lights, bringing them down a notch.

At the College of the Atlantic, in Bar Harbor, Me., it’s all about the environment. The 325 students share the same major, human ecology, and in the one required course, first-year students grapple with what that means.

“The core of human ecology is real simple,” says David F. Hales, president of the college. “Individual humans exist in a natural and cultural environment, and human ecology is the study of how we relate to those environments.”

While sustainability and the physical environment are certainly major components, the concept of human ecology goes much further, encompassing almost anything students elsewhere study: history, art, physics, literature. But whatever the subject, the focus here is on the interdisciplinary connections that distinguish the college, which has no departments. While all sections of the human ecology course read “The Great Gatsby,” they read it alongside Karl Marx, Adam Smith and Barbara Ehrenreich, the author of “Nickel and Dimed” — and the discussion touches on wealth, consumption and social class as well as literary style.

Professors from many disciplines teach the class, bringing their own expertise to bear; David P. Feldman, a physicist/mathematician, for example, teaches the use of the Gini coefficient, which measures inequality in income.

At a time when concerns about climate change are moving higher on the national agenda, and colleges nationwide are thinking about ecological responsibility and how to reduce their carbon emissions, the College of the Atlantic, founded in 1969, pledges to become the nation’s first “net zero” campus for greenhouse gas emissions by year’s end.

There are almost a dozen small eco-colleges, most offering a mix of hands-on experiential learning, outdoor adventures and liberal arts. It can be hard to tell the players without a scorecard. Northland College, in Wisconsin, calls itself “The Environmental Liberal Arts College,” while Prescott College, in Arizona, uses the tagline “For the Liberal Arts and the Environment.” Green Mountain College is “Vermont’s Environmental Liberal Arts College.” And just 80 miles west of Bar Harbor is Unity College, “America’s Environmental College.” There are even two consortiums of eco-colleges, the Eco League and the North American Alliance for Green Education.
The colleges differ substantially: Unity, for one, was founded in 1965 to bolster the local economy after its town was bypassed by the new Interstate. Its student population of 500 is a mix of rural conservatives, many of them avid hunters, and members of the “1969 Club” (as the president, Mitchell Thomashow, calls them, because “they look like I did then”), who are interested in sustainability, local agriculture and ecology. The college has beehives, a maple-sugar shack and a partnership with the outdoor education organization Outward Bound, which every fall takes a group into the wilderness for an entire semester.

Northland, founded in 1906 near Lake Superior, began its environmental studies program in 1970. It has a wolf project, a loon project — and N.C.A.A. Division III athletic teams, a rarity among eco-colleges. “People who have visited all the Eco League schools say we have the most traditional feel,” says Karen I. Halbersleben, president of Northland, which has 700 students.

Whatever the eco-colleges are doing seems to be working. Most are getting a growing number of inquiries from potential students, and a growing pool of applicants. “We call it the green tsunami,” says Ms. Halbersleben.

At the extravagantly beautiful College of the Atlantic campus, nestled between Acadia National Park and Frenchman Bay on the Atlantic Ocean, no detail in the quest for sustainability is overlooked: biodegradable linoleum with organic binding glues, environmentally responsible hydrogen peroxide cleanser, biodiesel in the tractors and generators at the research center on Great Duck Island, community garden plots, an organic farm and zero-waste graduation ceremonies. Composting toilets are a periodic topic of discussion at the all-college meeting, which is held every Wednesday.

At his inauguration last year, Mr. Hales had vowed that the college would avoid, reduce or offset with special projects all contributions to global warming associated with its activities, including travel by students to and from campus — a daring promise, and not the only one he has made.

“We’ve said that by 2015, all our activity will be from renewable resources,” says Mr. Hales. “We have no idea how to do it, and it’s staggeringly complex, but it’s important, and I believe higher education is the institution to lead the way. We teach students that individuals can make a difference, and that if you have the opportunity to make a difference, you have the responsibility. We believe that, so we have to act on it.”

In a way, the very smallness of the community, and the lack of academic-department boundaries, encourage large-scale brainstorming — and not just about energy use.

Indeed, Mr. Hales says, the human relationship with spirituality and with computers should also have a place in the curriculum. “We’re still exploring the outer boundaries of human ecology,” he says. “Does it include the virtual world, the imaginative world? We’re exploring the possibility of virtual classes that involve avatars.”
All students — of whom about two-thirds are women — do internships, and a senior project. Classes are tiny, usually 5 to 15 students. Because it is so small, and because students can design their courses of study, the college often connects students with off-campus resources. “If you want to learn Arabic, we’ll work with you, find you a tutor for the rudiments and then probably send you to study abroad for a term,” says Mr. Hales.

THE College of the Atlantic, which is listed in The Princeton Review’s “Best 366 Colleges,” inspires a high level of engagement, according to student surveys.

Consider the trajectory of Elsie Flemings, a quiet powerhouse who graduated last year and is now working as coordinator of the Union River Watershed Coalition and thinking about a run for the State Legislature in Maine.

Ms. Flemings attended Columbia for a year, then took two years off, working and traveling, before arriving at the College of the Atlantic. Her first year there, she organized a course on timber framing, in which 11 students learned the craft of building without nails and constructed a timber-frame barn for the college. She went on to work with SustainUS, a national youth organization, and last year became the nation’s sole youth representative at the United Nations’ 14th Commission on Sustainable Development. Her project on the economic impact of big-box stores led to a law that was signed last summer: Maine became the first state to require large retail stores to file economic-impact assessments.

About a fifth of the College of the Atlantic’s students are international, and its alumni go into a wide range of careers, with education, natural science and art and design at the top of the list.

Nishanta Rajakaruna, who comes from Sri Lanka, graduated in 1994 and returned three years ago to teach botany. In his edible botany class, students nibble on leaves from a stevia plant, discovering the overwhelming sweetness of this weedy herb. First comes classic botany: alternating leaves, the asteracae family, scientific name Stevia rebaudiana Bertoni, commonly called sugar leaf. But the discussion progresses to how the plant has been used by the Guarani Indians for hundreds of years; how it offers a noncaloric, noncarbohydrate sweetener, safe for diabetics but not approved as a sweetener by the F.D.A.; and how commercial interests shape what comes to market.

Even for seasoned College of the Atlantic students, the definition of human ecology is a continuing theme. “Yesterday, a group of us, all seniors, were sitting around, saying, ‘So what is human ecology?’” says Ashlesha Khadse, who after a three-month Spanish immersion in Central America is now deep in plans for her senior project on the loss of crop diversity in Mexico and Guatemala. “It’s a way of looking at things and also a way of acting. I’m from India, and you’re supposed to study something like engineering, so I came here without any interest in ecology. But it has taken me over.”

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