Eco-Entrepreneurship Evolves
Oran Young, Professor Emeritus
Connections: Bren and AB 32
Alumna’s LEED Platinum Home
Dean’s Message

Creative ideas for new environmental solutions permeate Bren Hall. They emerge as students push to solve challenging problems in their thesis projects, as our world-renowned faculty pursue pioneering interdisciplinary research, and as the community at and beyond Bren convenes for provocative discussions on meeting diverse environmental challenges.

But as stimulating as the lively exchange or the pioneering research project can be, if the ideas generated are confined to the school, they won’t go far in solving real-world challenges. Great ideas resonate far beyond their point of origin, and their spread depends as much on the skills of the messenger as on the merits of the message.

This issue of Bren News explores some of the diverse ways that innovations of the Bren community are resonating around the world.

One way to launch ideas is to promote entrepreneurship. Bren master’s students in the Eco-Entrepreneurship (Eco-E) focus (P. 8) develop the skills necessary to build adaptive business models around their innovative ideas and launch new environmental business ventures. The booming Eco-E focus evolved to meet the needs of students who were coming to Bren with not only great talent and intellect, but also a keen entrepreneurial spirit.

Another way to ensure that ideas resonate is to create whole new ways of thinking about major environmental topics. That has been the life’s work of newly emeritus professor Oran Young. His profile (P. 12) reveals the tremendous impact he has had on issues ranging from environmental governance to the concept of coupled systems to the science-policy interface.

Elsewhere, you’ll find Bren links to AB 32 (California’s Global Warming Solutions Act; P. 10), visit a Bren alumna’s LEED Platinum home (P. 15), and meet future environmental managers focused on ocean sustainability — the inaugural fellows in the Latin American Fishery Fellows program, funded by the Walton Family Foundation (P. 3).

Finally, amid the Bren interdisciplinary mix, PhD student Allison Horst (P. 7) reminds us that balance is key. When not studying the environmental implications of engineered nanoparticles, she makes beautiful art, like the painting that graces the cover of this issue. It is, in a word, resonant.

Distinguished Visitors on Climate Change, Year Four

The Zurich Distinguished Visitors Program on Climate Change will feature the following three thought leaders during the course of the 2011-2012 academic year. Each will present a public colloquium and teach a short course at the Bren School.

Dennis Ojima will be in residence from October 3-14. Dr. Ojima is a professor in the Department of Forestry, Range-lands and Watershed Stewardship at Colorado State University, Fort Collins. In 2005, he was awarded the Zayed International Prize for the Environment for his contribution to the Millennium Ecosystem Assessment, and in 2007 he shared the Nobel Peace Prize for his work on the Intergovernmental Panel on Climate Change (IPCC).

Dr. Ojima performs research that is foundational to developing science-based solutions and decisions related to climate change. He studies ecosystem dynamics in relation to changes in climate, land use, and biogeochemical cycles as they reflect natural and human-generated forces, and examines the interactions of climate and human activity to support land-use management decisions.

Edward S. Rubin, professor of environmental engineering and science in the Department of Engineering and Public Policy at Carnegie Mellon University, is scheduled to visit the Bren School in February 2012. Dr. Rubin conducts research in the areas of engineering-economic modeling and assessments of energy and environmental systems, with a focus on fossil fuel power generation, mitigation strategies for global climate change, carbon capture and sequestration, environmental technology innovation, and the role of government policies.

The Distinguished Visitor for spring quarter will be announced later in the year.

For more information: bren.ucsb.edu/supporting/zurich.htm
First Latin American Fishery Fellows Enter Bren

The Bren School is hosting five new students (MESM 2013) who are the first to receive fellowships through the Latin American Fishery Fellows Program, made possible by a generous gift from the Walton Family Foundation.

Fellows, who are committed to return to Latin America to lead sustainable-fisheries reforms, receive the full cost of tuition and expenses while pursuing their Master of Environmental Science & Management degree with a concentration in Coastal Marine Resources Management.

“Latin America holds tremendous promise for prosperous fisheries that align community well-being, economic vitality, and environmental conservation,” said Walton Foundation trustee Sam Walton. “We are therefore delighted to fund this group of students in the Latin American Fishery Fellowship Program at the Bren School. We know that these students will combine the best available training with energy, passion, and commitment to make a difference in key South American fisheries. We wish them all the best and look forward to charting their progress in the years to come.”

Jacy Brunkow is American but has taught field courses in marine conservation across Latin America and spent substantial time studying regional fisheries issues, notably while living in a small fishing village in Mexico. Matias Caillaux was born in Peru and has been working to strengthen enforcement of regulations intended to ensure the sustainability of Peru’s fisheries. Miguel Cosmelli comes to Bren from Chile, where he has developed regional economic policies while working in the Fishing Division in the national Department of Economics. Renato Molina is an aquaculture engineer, also from Chile. He teaches at Pontificia Universidad Católica de Valparaíso and has developed models for sustainable aquaculture. Jade Sainz hails from Mexico and has used her GIS knowledge to develop models for sustainable aquaculture management at Mexico’s National Commission of Fisheries and Aquaculture. The goal of the fellowship program is to train a new generation of fisheries and marine-resource managers, conservation practitioners, and environmental leaders. Alumni will be poised to lead market-based approaches for solving fisheries and other ocean-management challenges throughout Latin America.

Business and the Environment: Net Impact Gets Rolling at Bren

During the 2010-11 year, a group of master’s students established a Bren chapter of Net Impact (NI), an international organization that supports using the power of business to create a more environmentally and socially sustainable world. NI acts as a network linking some 280 student and professional chapters worldwide, whose members work in the fields of corporate social responsibility, social entrepreneurship, nonprofit management, international development, and environmental sustainability. Chapters receive event notices, invitations to conferences and seminars, access to webinars and workshops, and more.

“We’re excited about NI’s focus on corporate environmental management,” says Gomati Madaiah (2012), one of nine members of the Bren leadership team, which is advised by Emily Chan, manager of the Eco-Entrepreneurship focus.

“It’s a vehicle for providing business-related extracurricular activities and speakers,” adds Harry Vickers (2012). “With so many chapters in 180 countries, it’s a great network to have.”

Most student chapters are housed within MBA programs, but the Bren chapter — based at a graduate school of environmental science and management where many students are also interested in business — brings a unique contribution to NI. And with the availability of professional memberships, Bren students can continue to use the network after they graduate.

“We see our professional competitors as graduates of MBA programs, and this provides an entrée into that world,” says Jean Cheng (2011), founding events coordinator for the Bren chapter. “It also allows us to bring in speakers we want to hear and hold workshops on issues we care about. It’s more fluid than a school curriculum and is adaptable to changing concerns.”

Chapters are required to hold occasional events, and the Bren students have already participated in a native-plant restoration, held an event on how environmental markets might affect the careers of environmental managers, and hosted Karen Smith Bogart, a former CEO of Kodak’s East Asia operations, who joined Bren assistant professor Sangwon Suh to speak about conducting business across cultures.

To find out more, contact Madaiah (gomatimadaiah@gmail.com) or Vickers (hvickers@bren.ucsb.edu).
Faculty and Staff News

Frank Davis, Bren professor of landscape ecology, has been named director of the UCSB National Center for Ecological Analysis and Synthesis (NCEAS). Davis will lead NCEAS and serve as its ambassador as he seeks to replace National Science Foundation funding, which expires in 2012. He will remain on the Bren School faculty but will not teach this year, in order to free up time for the NCEAS work.

“NCEAS doesn’t do management or policy per se; it does science in a way that is particularly relevant to policy makers and decision makers,” Davis says.

Papers resulting from work done at NCEAS rank among the top one percent in terms of the frequency with which they are cited, making it “one of the most influential institutions on the planet in terms of ecology,” says Davis, adding, “I’m doing this because I think the place is that important. I’ve gotten a lot out of it over the years, and as far as I can tell, other people who have used NCEAS love it and would hate to see it go.” (nceas.ucsb.edu)

In July, Bren professor of environmental microbiology Patricia Holden became director of the UCSB Natural Reserve System (NRS). While assuming her new responsibilities, Professor Holden will remain at Bren as a full-time faculty member.

“Dr. Holden’s research addresses a wide range of topics involving the interactions of humans, bacteria, and the environment,” said In July, Bren professor of environmental microbiology Patricia Holden became director of the UCSB Natural Reserve System (NRS). While assuming her new responsibilities, Professor Holden will remain at Bren as a full-time faculty member.

“Dr. Holden’s research addresses a wide range of topics involving the interactions of humans, bacteria, and the environment,” said holding the position of NRS director.”

UCSB manages 6 of the 36 sites in the system: K.S.N. Rancho Marino, Valentine Eastern Sierra Reserve, Coal Oil Point Reserve (at UCSB), Sedgwick Reserve, Santa Cruz Island Reserve, and the Carpinteria Salt Marsh.

“One thing I really look forward to is helping to seed opportunities for exciting MESM Group Projects with and for the reserves,” says Holden. “What changes with this directorship is that some of my teaching will be reduced in the coming years.” (nrs.ucop.edu)

Michael Witherell, Vice Chancellor for Research, in announcing her appointment. “We are fortunate that a person of this stature and experience has agreed to take on this important position.”

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David Parker, Bren School Director of Career Development and Alumni Relations, has joined the new Green Careers Journal Roundtable Forum, which is part of the Environmental Career Center in Hampton, Virginia. The group includes leaders in environmental, sustainability, natural resources, and employment specialties who work in consulting, industry, government, academia, and NGO sectors.

Center director John Esson invited Parker to join the forum, based on his “longstanding expertise on environmental careers” and “outstanding articles he wrote several years ago for the career center’s National Environmental Employment Report.” Articles produced by members of the new forum will be published in the Green Careers Journal and uploaded to the forum website, which averages more than 30,000 visitors per month. (environmentalcareer.com)

Matthew Potoski is the newest member of the Bren School faculty, arriving after 12 years at Iowa State University. Potoski teaches courses on corporate environmental management, and his research focuses on management, voluntary environmental programs, and public policy. He received his PhD from Indiana University in 1998 and a bachelor’s from Franklin and Marshall College in Lancaster, Pennsylvania. He co-authored The Voluntary Environmentalists (Cambridge, 2006), served as co-editor of Voluntary Programs (MIT, 2009), and is currently co-editor of the Journal of Policy Analysis and Management and the International Public Management Journal.

Potoski comes to UCSB with his wife, Alicia, who is joining the faculty in the Department of Sociology, and their two young sons, Ben and Oliver.

“I’m thrilled to be joining the Bren school,” he says. “There is just so much talent here, from the students to the faculty and the staff. I feel energized.”

Gift to Keep Bren Hall Salt Water-free

The Bren School knows salt water; after all, the Pacific Ocean is right across the street from Bren Hall, and many Bren students surf or learn to while they’re here. They throw on their wet suits, catch a few waves between classes, and then rinse off in the third-floor shower, which earned points toward Bren Hall’s LEED® Platinum certification. LEED’s logic is that an on-site shower saves energy by encouraging biking, skateboarding, walking and other active forms of alternative transportation. But saltwater dripping from surfboards and wetsuits can create a slipping hazard and damage linoleum hallway floors, while sand and kelp can clog the shower drain. Ever searching for solutions, the master’s class of 2011 presented the school with funds to create an enclosed outdoor shower as well a surfboard and wet suit storage space. The structure will free up space on the balcony by the student kitchen, where surfboards were stored previously, and keep water and sand out of Bren Hall. That’s a win-win — for surfers and scientists.
The sleek, well-appointed new Visitors Center

After a year of planning and construction, the all-new Edison International Visitors Center opened at the Bren School on May 19. The event was attended by several hundred people and featured presentations by CalEPA Secretary Linda Adams; Stephen Pickett, SCE Executive Vice President of External Relations; Gene Lucas, Executive Vice Chancellor, UCSB; and Bren Dean Steve Gaines. “Our hope is that an experience at the Edison International Visitors Center will enable guests to bridge the gap between understanding sustainability as an abstract concept and experiencing it as a part of everyday life,” said Gaines. “This new space is an ideal vehicle for extending our public-service mission and sharing the wealth of research and knowledge that is generated by our faculty and students and through our ongoing collaboration with SCE.”

The center was made possible by a generous gift from SCE, a Bren Corporate Partner. For more information, go to: bren.ucsb.edu/about/visitors_center.htm. To learn more about efficiency in Bren Hall, to see real-time monitoring of water and energy use, or to make a commitment to sustainability in your own life, go to: buildingdashboard.net//ucsb/bren/.

The Bren School also recently partnered with SCE to host a public event at UCSB that included a panel discussion and a Q&A session around the issue of energy efficiency and “smart meters,” which are being introduced in SCE’s service area. See video of the event at www.bren.ucsb.edu/smart_video.htm.

For more on the Corporate Partners Program, go to www.bren.ucsb.edu/supporting/corporate_giving.html

Jennifer Deacon, Bren Assistant Dean of Development, has been named Acting Senior Director of Development of Campaign Operations for the university’s ongoing capital campaign. In her new role, which is in addition to her continuing duties at Bren, Deacon will spend a portion of her time working with UCSB Chancellor Henry T. Yang to direct the development and implementation of campaign strategies and activities. She will work closely with fundraising staff in departments across campus to integrate the campaign into area fundraising programs. Partnering with the regional fundraising team, and under the chancellor’s overall leadership, she will also work with various campaign committees to promote campaign activity and messaging across the state and the nation.

In addition to her position at Bren, since coming to UCSB in 1997, Deacon has served as Assistant Dean of Development for the Social Sciences, Assistant Provost for Development for the College of Creative Studies, and Director of Development for University Libraries.

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Students

Sustainable Sounds

The ever-evolving musical group Brenggrass spices up life at Bren

In fall 2005, Bren master’s student and musician Amanda Cundiff (2006) attended the annual Old Time Fiddlers Convention in Goleta. Inspired, she bought a fiddle and tracked down fellow Bren musicians. During rehearsals in Cundiff’s living room, Brenggrass was born as the ever-evolving, mainly-MESM band that infuses Bren events with a distinctive celebratory spirit.

Regulars that year included Cundiff and Niki Wilson from the Class of 2006, along with MESMs Gabe Brown, Brent Miller, and Aubrey Spilde (all 2007). The mix of first- and second-year students has continued ever since, with new songs being added and familiar ones being passed on to become Brenggrass standards.

“I had originally wanted a group to play bluegrass — that’s how we got the name,” says Cundiff, “but none of us had a background in bluegrass music, and we never played straight-up bluegrass tunes.”

But playing a specific genre of music was never as important as simply playing.

“For me — and I probably speak for all of us — it was wonderful to have a regular stress reliever, a time to be artistic, and a space to socialize while learning and practicing something beautiful,” Cundiff says.

When spring came that first year, the Bren School’s innovative, bluegrass-loving events coordinator, BJ Danetra, caught the band at the Bren talent show and invited them to play at commencement. But they knew only three songs. Danetra said, “Learn ten more and you can play.” They did, starting a tradition that continues today.

Students have played guitar, fiddle, drums, mandolin, banjo, flute, acoustic bass, trumpet, French horn, melodica, kazoo, keyboards, tambourine, and accordion. The 2011 commencement version of Brenggrass totaled eleven musicians, including alumnus Hylton Edingfield (MESM 2010), an accomplished musician who expanded not only the repertoire but also the complexity of the arrangements during the two years he led the band.

“We keep hoping to do more bluegrass,” says nominal 2010-2011 leader Joe Bergeson, who graduated in June and is now on the PhD track. “We’d be happy to do it, but it just hasn’t gone that direction. The band takes us where it wants to go.”

Five Students Are Final Doris Duke Conservation Fellows

Teo Grossman, Kelsey Jacobsen, Adam Livingston, Alex Silvester and Marisa Villareal (all MESM 2012) are the final group of Bren students to receive Doris Duke Conservation Fund Fellowships. The Doris Duke Charitable Foundation is ending the program after this year but will continue to support conservation-focused students through other avenues.

For the past four years, the Bren School has been one of just eight institutions in the United States to receive the fellowships. Each fellow receives full tuition for one year plus a $5,000 stipend to cover costs associated with a summer internship.

The fellows recently completed the following internships:

Teo Grossman: Specializing in Economics and Politics of the Environment, Teo spent the summer working with the California Environmental Dialogue in Santa Barbara, a new long-range project started by Bren adjunct professor Robert Wilkinson and focusing on the future of California’s environment and resources.

Kelsey Jacobsen: Kelsey’s specialization is Coastal Marine Resource Management. She spent the summer at the National Center for Ecological Analysis and Synthesis (NCEAS) in downtown Santa Barbara, researching the economic and job contributions of marine sectors for the Ocean Health Index, a collaborative project that will offer a new global standard for measuring the health of the oceans.

Adam Livingston: Specializing in Conservation Planning, Adam did conservation-planning work this summer for Sequoia Riverlands Trust in Visalia, California. The nonprofit is dedicated to conserving the natural and agricultural legacy of the southern Sierra Nevada and the San Joaquin Valley.

Alexander Silvester: Alex is specializing in Conservation Planning at the Bren School. He headed to Chicago for the summer to work in a business-analyst position for Dairy Management Inc.

Marisa Villareal: Marisa is pursuing two Bren specializations: Coastal Marine Resource Management and Conservation Planning. Her summer internship took her to southern Chile, where she worked with the Wildlife Conservation Society and the University of Concepción, investigating the sustainable development of the region’s salmon aquaculture industry.
The Painterly PhD

A student pursues science and art on her path to a doctoral degree

It has been noted often enough to become cliché: the opposition between the left and right brain, the linear thinker and the holistic thinker, the scientist and the artist. But what happens when left and right combine, when scientist and artist meet in a single mind? Well, you might get someone like Bren PhD student Allison Horst.

Now in her fifth year of doctoral work, Horst earned her undergraduate degree in chemical engineering and her master’s in mechanical engineering, both from UCSB. With Bren professor Patricia Holden as her advisor, she is currently studying the environmental toxicity of nanoparticles, specifically how bacteria are affected by various types of engineered titanium-oxide nanoparticles, one of the most widely produced and commonly used nanoparticles.

“It’s a cool intersection of biology, engineering, and chemistry, and it perfectly mixes all the different fields that interest me,” Horst says. “It’s also the first time that a whole new realm of technology is coming out and we’re actually trying to keep up with it in terms of toxicity studies, unlike in the case of DDT and asbestos, which we used for decades and then found were having horrific environmental effects.”

Horst would like to pursue a career in academia, with teaching as her focus. “I really like research, but I love teaching,” she says, having taught calculus in the Bren master’s summer math workshop here for the past four years. “I feel like a fish in water when I’m teaching, and even in a less research-driven university, like a Cal State, you can help the next generation of researchers.”

While the rigor of the PhD path can completely absorb a student’s life, Horst occasionally needs to leave the lab behind, get outside, and paint something. “When I get the urge to paint, I have to do it,” she says. “It’s like when you’re really hungry and it’s all you can think about until you eat; that’s how I feel when I need to paint.”

For Horst, making art outdoors brings her balance on the PhD path. “I have to have fun, and part of that is doing art,” says Horst, who grew up in San Luis Obispo and developed a strong appreciation of nature while hiking and camping with her parents and siblings. “Some people can focus completely on one thing for five years of their life, but I can’t. I’ve always done lots of things, and I love art and science equally.”

Accomplished at both, Horst has been painting ever since her parents gave her an easel and oil paints when she was 14. She has completed hundreds of canvases, while exhibiting in galleries and selling her works at prices ranging from a few hundred dollars to more than a thousand. Her work will be on display in the Edison International Visitors Center in Bren Hall on October 11, following the Annual Recognition Dinner.

She paints mainly landscapes but also does street scenes, animals, and people — always with her faithful dog, Mattie Mae, a rescue from Hurricane Katrina, sitting under the easel. While reluctantly describing her style as “contemporary impressionist,” Horst is only halfway kidding when she says, “Maybe I can just start a ‘Central Coast Minimalist Funk’ plein air movement.”

However she describes her style, her paintings have more than a tint of scientific precision. “I approach a painting a lot like I do a science question,” she says. “I hope it doesn’t come across in my work, but I paint very systematically and always follow specific steps.”

That “scientific” approach to painting finds its complement in her visual approach to science. “Trish [Holden] figured out a way to explain things to me so that I understand them, and a lot of it has to do with making drawings,” she says. “And I make them for her.”

“If I haven’t met too many scientists who also paint and sell their work, so I would imagine that Allison is a rare breed,” says Holden. “It is great that she has this talent and so important for students to have ‘another life’ outside of research, to be balanced. Scientific research is creative, so I would imagine that her creativity at the canvas is helpful to her inspiration and creativity at the bench.”

Not surprisingly, Horst’s left-right equipose comes with challenges — from both sides. “Because of the other things I do and how I talk, people can underestimate how serious I am when I’m doing science,” she says, “and galleries don’t take me seriously as an artist. But to me, they seem totally complementary.”

Allison Horst, poised between art and science

“Morning at Montaña de Oro”
Curriculum

The Green Edge of Entrepreneurship

In the only curriculum of its kind in the nation, students don’t just study new business ventures; they bring environmental innovations to market.

The Bren School’s Eco-Entrepreneurship (Eco-E) focus was formalized in 2007, in response to students who, for some years, had been bringing to Bren a combination of intellectual strength, environmental focus, and the creativity, attitude, awareness, and spirit that define entrepreneurs.

Mark Kram (PhD 2002), Jaime Dietenhofer (MESM 2002), and Victoria Broje (PhD 2006) were among those who led the way. Kram now heads his company, Groundswell Technologies, a pioneer in automated earth monitoring; Broje’s patented redesigned drum skimmer is sold around the world for use in cleaning oil spills in marine environments; and Dietenhofer designs modular systems for organized, eco-friendly garages at his company, Garage Envy, and recently launched Figueroa Mountain Brewery.

The Bren School has always defined itself as a center of innovation while demonstrating a unique ability to adjust quickly in response to identified needs, such as some students’ desire for entrepreneurial training. Forward-thinking faculty, attuned to the needs of students, realized that a formal Eco-E training program was needed, and Professor Gary Libecap, who had co-founded and directed the nation’s top-ranked entrepreneurship center at the University of Arizona, was instrumental in moving the idea forward.

“An important part of the Bren School’s mission is to prepare individuals to be effective problem solvers regarding the environment and natural resources,” says Libecap. “The same creative energy and inspiration that brought us GPS, Facebook, Wikipedia, LED lighting, and iPods also can address the critical environmental and resource challenges that we face. This is the reason for eco-entrepreneurship — to provide students the tools to innovate on behalf of the environment by creating new products, new processes, and new ways of doing things that are both economically rewarding (so they can attract the needed investment and involvement of others) and broadly environmentally beneficial. Eco-entrepreneurship is where solutions will appear, and Bren graduates will be at the forefront of that process.”

The Eco-E focus, a series of supplemental courses for Bren master’s students, was launched in 2007 in collaboration with the highly regarded Technology Management Program (TMP) at UCSB’s College of Engineering, to provide the training required to bring environmental products and services to market. In the ensuing four years, Eco-E has evolved to reflect the particular needs of Bren students who are creating new environmental ventures.

“It’s exciting to see how the Eco-E focus has grown and evolved in just a few years, and how much student interest it’s generating,” says Bren dean Steve Gaines, reflecting the fact that up to one-third of all Bren master’s students now enroll in the initial Eco-E course. “The program is also extremely important. Solving our sustainability challenges will require creative innovators to design new products that allow people to do familiar tasks, and new ones, in a much more environmentally friendly way. We’re giving those entrepreneurs the tools and knowledge they need to make a difference right away.”

One unique aspect of the Bren School is the capstone Group Project, in which groups of three to six students spend nine months collaborating with each other, a faculty advisor, and a client to solve an environmental problem. Historically, Eco-E students also completed Group Projects focused on their business ideas, but the Master’s Group Project guidelines and courses did not fully address the needs of Eco-E students. The solution was to create...
the Eco-E Project, which parallels the Group Project but allows for a more immersive entrepreneurial experience.

While Group Project teams solve environmental problems for clients, Eco-E Projects focus on a potential customer who represents a business opportunity to create a product or service having an environmental benefit to society. It requires students to identify customers and markets before moving forward with product development.

“There is likely no existing market for their product because it is by definition new and has no current customers or competitors,” says Emily Chan, a successful entrepreneur herself who serves as Eco-E program manager and teaches the Eco-E courses. “They have to uncover a real customer problem and come up with a product that will serve this need and benefit the environment. Next, they must develop an innovative business model and a careful strategy for markets to adopt the product, and they have to examine government policy to determine whether it is aligned with their success or they will need to try to influence policy.”

Eco-E project teams are also required to enter two new-venture competitions; one is run by TMP, and the other is associated with the Bren chapter of Net Impact. (See story on page 3.) The events give students experience pitching new ventures in a competitive setting and can lead to business funding. Any MESM student may complete an Eco-E Project instead of a traditional Bren Master’s Group Project, provided he or she has completed sufficient coursework, while Eco-E students may also opt for a traditional Group Project.

“The students are being entrepreneurs as part of the learning process,” says Satie Airamé, Bren assistant dean for academic programs.

The Eco-E focus and the projects in particular, reflect the Bren School’s emphasis on taking a systems approach to environmental endeavors. Eco-E now incorporates concepts associated with entrepreneurial visionary Steve Blank, particularly, says Chan, “the customer-centric focus, the ‘lean’ start-up, and the observation that no one fails in producing the product; they fail because they don’t think through the other aspects of the business. They lack customers and a solid business model.”

When Eco-E began, the major student “product” was a business plan. “But that was more about understanding how to grow a company,” Chan says. “It wasn’t dynamic enough to reflect the challenges and obstacles that will face the students’ start-ups in the real world.”

Now students develop an evolving business model, which requires them to test their hypotheses systematically and determine a strategy for creating, producing, and delivering their product or service. If one part of the model proves unfeasible, the group has to look for alternatives and then address any effects the change may have on the overall strategy.

“It’s a codified puzzle,” says Chan. “Through the process, you understand piece by piece how your puzzle fits together and the identifiable things you need to do. It’s a lot about the research, the customer, and the problems.”

The process involves a philosophy developed by Toyota, known as genchi genbutsu, which translates roughly as “go and see.” In the context of the Eco-E feasibility project, Chan says, it refers to students “getting out of the classroom and conducting research by talking to actual human beings who they think are their potential customers.”

The challenges are real, says Chan, “because it’s far better to run into the walls and obstacles and fail in this setting, before you are out in the world launching your company.”

The students receive regular feedback and support from various sources. Faculty members on the Eco-E Project Committee provide academic review of the projects to ensure that the students demonstrate competency in the science and other knowledge related to the field of their enterprise. At the end of their first year, students participate in a “Lessons Learned” process that involves presenting a progress report on their business model before the committee and a panel of experienced professional entrepreneurs, and then fielding questions from them.

Eco-E retains all the academic rigor of the Bren master’s program. Eco-E students complete the full Bren MESM core requirements, as well as coursework associated with one of seven specializations. But they also take a ten-unit series of primary Eco-E courses at the Bren School and at least four units of Eco-E electives at the Bren School and TMP.

Starting in fall quarter of their first year with Introduction to Entrepreneurship and New Venture Creation (ESM 256A), students generate ideas, recognize potential opportunities, develop initial concepts, and begin to engage in customer research. In winter quarter, they take New Venture Opportunity Analysis (ESM 256B) to develop the analytical and conceptual skills needed to assess the feasibility of the new venture. In spring quarter, they take New Venture Formation (ESM 402A) to develop and test their business models through continued customer research.

“In the beginning, Eco-E students had to fit into two existing tracks: TMP at Engineering and the Bren Group Project,” Chan explains. “Now, the curriculum is more streamlined and Bren-centric, and the coursework ties in with the core interests of Bren students.”

Teaching eco-entrepreneurship sets the Bren School apart, she adds: “It’s the nation’s only program that is applying cutting-edge entrepreneurial methodologies to environmental ventures.” (www.bren.ucsb.edu/academics/eco_entrepreneur.htm)
Bren and AB 32
Links to California’s groundbreaking Global Warming Solutions Act

The passage of Assembly Bill 32 in 2006 established California as the first state in the U.S. to enact legislation designed to address climate change by reducing greenhouse-gas (GHG) emissions. Two years later, the California Air Resources Board (ARB) released the “Climate Change Scoping Plan,” establishing strategies and procedures for implementing what has come to be called the “Global Warming Solutions Act.”

Over the past several years, the involvement of Bren School faculty, students, and affiliates in processes related to AB 32 have demonstrated, again, the reach of the school’s impact on important environmental issues, while underscoring the diversity of the extended Bren community and the range of influence it brings to bear.

On the Bren faculty, professor of environmental economics Charles Kolstad, a lead author for the Intergovernmental Panel on Climate Change, also serves as a special employee on the ARB research screening committee, which evaluates research proposals that support ARB activities, some of which are climate related. He is also co-director of the University of California Center for Energy and Environmental Economics (UCE²). The UC-wide center has offices at the Bren School and UC Berkeley and brings together scholars and researchers on issues related to energy and climate policy, energy efficiency, market-based environmental regulations (i.e. cap and trade), and other subjects. Cap and trade, scheduled to be rolled out for a kind of test run in 2012, is one element in the Scoping Report’s multi-pronged approach to implementing AB 32.

UCE² also plays an important role in the economics of regulatory implementation, which is at the heart of many discussions related to AB 32 and climate change mitigation strategies in general. Emily Weinberger, a new UCSB professional researcher in UCE², recently received her PhD in agricultural and resource economics from UC Davis. She is shuttling among Sacramento, Santa Barbara, and Berkeley in her recently acquired position as UCE²’s economics point person for AB 32.

“She’ll spend two years working at the interface between the UC and ARB to help improve the quality of economic analysis of AB 32 and other CARB regulatory actions,” says Kolstad. “One big criticism ARB has received is that their economics is weak. They’re trying to fix this, and we are playing a pretty central role in that.”

“The goal of my position is to identify opportunities for ARB to expand the scope of its economic analysis to support its rulemaking and research, including but not limited to AB 32,” says Weinberger. “The position came about as peer reviewers voiced some concerns about ARB’s economic analysis of AB 32. This position is one of many ways that ARB is addressing those concerns.”

Weinberger will spend 80 percent of her time at ARB and 20 percent within the UC academic community. “This split is intended to encourage the interaction between UCE² and ARB,” she explains. “I can bring together academic researchers and policy makers working on similar issues in different arenas.”

The Corporate Partners program is another area of connection to AB 32.

This past spring, the 2011 Corporate Partners Summit centered on what the law means for California businesses and how they can best prepare for it. Among those attending the two-day summit was CalEPA Secretary Linda Adams (since retired), who presented the first annual "State
of the Environment” address. She discussed implementation of AB 32 and development of the Scoping Plan, in which she played a major role. “It’s critically important to achieve full implementation of AB 32, and I think we will be able to do it,” she said in a phone interview recently. “As the world’s eighth-largest economy, we have the responsibility of showing other governments that we can achieve our energy-efficiency and carbon goals and boost the economy as well. We will meet our goals because of the comprehensive approach we’re taking, as laid out in the Scoping Plan.”

Adams was referring to the plan’s key elements, which include expanding and strengthening existing energy-efficiency programs, requiring that 33 percent of the state’s energy comes from renewable sources by 2020, developing a cap-and-trade program for emissions linking California with partner programs in other states, and pursuing an array of policies to reduce transportation-related GHG emissions.

Also involved in the Corporate Partners program and AB 32 is Ivor John, General Manager of LRQA Americas Sustainability Inc.

LRQA is one of about forty companies accredited by ARB and tasked to verify emissions levels of roughly six hundred facilities, which include power-generating companies, refiners, oil and gas producers, and other facilities that release more than 25,000 metric tons of emissions per year and are therefore required to report to the ARB program. LRQA verifies emissions reports for about fifty of these facilities. It also verifies emissions of co-generation facilities that provide heat or steam to other businesses for use in food processing, heating, and oil and gas recovery.

The emissions reports are an indispensable element in ARB’s efforts to establish baseline emissions levels for California’s largest CO2 emitters.

LRQA general manager, Ivor John (left), speaks with Jessica Golman (MESM 2011).

“ARB is in the process of assigning baseline allocations for emissions,” John says. “Once these baselines are in place, the Scoping Plan kicks in and the facilities will have to start reducing their emissions. ARB has several phased approaches to make this happen. While cap and trade is one of the most significant strategies, ARB expects to achieve more than a sixty-percent reduction of CO2 from strategies other than cap and trade.”

For John, the Corporate Partners program represents the opportunity to leverage LRQA’s efforts through interaction with other companies. “We benefit tremendously from the program, which allows us to interact with other global companies, such as Zurich Financial Services, which is a leader in climate adaptation,” he says. “The Bren School provides an opportunity for us to explore possible collaborations with other companies that are demonstrating leadership in climate change, and that helps us provide the best verification services for AB 32.”

Bren affiliates also have links to AB 32. William Sloan is a partner at Morrison & Foerster, a top environmental law firm that has another partner, Brooks Beard, serving on the Bren School Council of Legal Advisors. At the Corporate Partners Summit, Sloan discussed his AB 32–related practice, which falls into three main areas.

The first involves working with industry groups and companies involved with ARB in the rulemaking process for implementing the law, supporting them in evaluating and understanding their compliance obligations under the rules. He also works with industry to identify and address overlaps, contradictions, and other regulatory issues that may be encountered by, say, a company that wants to build a new power plant.

“We have existing laws to regulate environmental impacts, and now we have new regulations from ARB,” he says. “The challenge is to harmonize the various rules as they relate to a project. When you get new legal frameworks like this, the path to compliance is not always settled. The ambiguities of language haven’t been worked out. It’s the frontier of developing these new laws and regulations.”

Finally, Sloan works with companies that have new technologies and are evaluating how best to position themselves to take advantage of cap and trade, primarily through having the technology recognized as available for offsets under AB 32. Like so many issues related to implementing the law, Sloan says, “It’s not a straightforward proposition. It’s going to be an incredibly contentious area.”

Several Master’s Group Projects have also played a role in supporting businesses, nonprofits, and cities and counties to assess and reduce their emissions in the approach to implementation of AB 32.

In one 2010 project, a group of students worked with AECOM, a major environmental consulting firm and a Bren School Corporate Partner, to create a software tool that the City of Ventura used to develop efficient, cost-effective ways to reduce its GHGs. The students then traveled to China to partner with graduate students there who were doing similar “greening” work during the planning stages of a new industrial-residential city.
Faculty

Forty Years on the Intellectual Frontier

In his long and continuing career, Oran Young, Bren’s first emeritus professor, has broken new ground by creating whole new areas of thought.

Oran Young has always been in a bit of a hurry, not so much physically as intellectually, if only to keep up with the constant wellspring of ideas that have propelled him to the forefront of his main areas of professional focus: governance, environmental institutions, Arctic issues, and the science-policy interface.

He finished his undergraduate work at Harvard in three years and needed only three more to earn his PhD at Yale, which he received at the age of 24. “Along the way,” he says, “I picked up a master’s.”

Raised in Connecticut and Vermont, Young spent “every spare minute” of his youth enjoying what he describes as “the privilege of working outdoors in a close relationship with my father,” an entrepreneurial nurseryman who, in the 1940s, became one of the pioneers of plantation-grown Christmas trees.

Young began teaching in the Politics Department at Princeton in 1965, while studying social institutions and systems of property rights, and what he refers to as “the question of how societies supply themselves with collective or public goods.”

After co-authoring a book with two of his PhD students, titled Political Leadership and Collective Goods (one of his roughly thirty titles), he began “looking for interesting empirical applications where I could marry these theoretical concepts with substance.”

At about that time, the 1972 UN Conference on the Human Environment, held in Stockholm, brought attention to a range of environmental issues. “They emerged as attractive areas to think about systematically while exploring these theoretical issues,” says Young. “That’s when I got interested in natural resources and the environment.”

The Stockholm Conference led to the creation of the UN Environment Program, which ushered in a decade of major international agreements.

“I became interested in international environmental issues at a time when almost nobody else in the field of political science and international relations was,” Young recalls. “I’m not claiming I was prescient in any way, but I got to working on issues that kind of took off, going from literally a handful of people to a worldwide community of hundreds.”

Young has spent his life as an independent and innovative thinker who seeks out others of his kind, whether PhD students to advise or professional colleagues with whom to create initiatives and centers of thought and action.

“I’ve always been responsive to people who are not exactly following the standard track, who want to do something that’s a little unconventional and, possibly, risky in academic terms,” he says. “As time has gone on, certainly in the areas where I work — environmental issues and so on — it seems ever more clear that the conventional way of doing things is part of the problem, not part of the solution.”

At one point, Young became so disillusioned with what he describes as the inherent conservatism of academia that he left it altogether. By then he was a professor at the University of Maryland at College Park and living in Washington, D.C., where he met his future wife, Gail Osherenko, who has taught at Bren and was then a young lawyer working for a California congressman.

Young was heading a search committee for a new department chair. The first choice was “a really interesting person, a political philosopher who had an interest — from an academic point of view — in Marxism,” he recalls. “But the Board of Regents vetoed the candidate. That was during the Cold War era, and there were some very conservative people on the board, including J. Edgar Hoover’s younger brother.”

Young left academia in 1982, becoming involved with a highly innovative organization called the Center for Northern Studies. For the purposes of securing funding, they eventually became affiliated with Dartmouth College, created an Institute of Arctic Studies, and focused on what have become known as “coupled systems.”

“The intellectual driver was the notion of trying to understand complex and dynamic systems that require you to take into account both the human and biophysical elements in order to explain, predict, or manage anything,” Young says. “This was well before people were thinking about such things in a prominent way. We used the center and the institute and created focused programs under them.”

One of the most rewarding periods for Young came after the collapse of the Soviet Union. “It was an exciting period for the scientific community,” he says. “We were working in parallel with Russian colleagues on many issues involving both natural and social systems, but we were unable to have much interaction. There was a lot of pent-up energy around East-West collaboration on Arctic issues by the time we were able to hold a major international conference in 1988 in what was then Leningrad [now St. Petersburg]. It was a watershed because we were finally able to begin collaborating with our then-Soviet counterparts. We quickly started to develop collaborative projects with them.”

So Young found himself involved internationally with the
Arctic studies track and the environmental governance track, which were largely separate at the time. Simultaneously, the international effort to coordinate research on global environmental change was developing.

Around that time, too, the U.S. National Academy of Sciences received a grant to establish the Committee on the Human Dimensions of Global Change. Young became the committee’s first chair in 1989 and served for six years.

“Out of that, we produced a book that became a blueprint for the effort to develop a social science counterpart to the International Geosphere-Biosphere Program [IGBP], which had started in 1986,” he says. “This led to the development of the International Human Dimensions Programme on Global Environmental Change (IHDP).”

Through such efforts, Young says, “I have sought to integrate these areas that were formerly different tracks. They weren’t incompatible; they were just different communities of people doing different things.”

Next, Young began work on the institutional dimensions of global change, leading the Institutional Dimensions of Global Environmental Change (IDGEC). In the meantime, he had also become vice-president of the International Arctic Science Committee (IASC), an NGO created to support communication and collaboration between western and Russian scientists working on Arctic issues. At a major meeting at Dartmouth in (pre-Internet) 1995, some 300 to 400 scientists convened under Young’s chairmanship to collaborate in planning Arctic research programs.

In creating an IDGEC science plan, Young and his colleagues focused on three analytic themes — fit, interplay, and scale. In an introduction to his 2002 book, The Institutional Dimensions of Environmental Change: Fit, Interplay, and Scale, Young wrote, “They center, respectively, on the congruence between the properties of biogeophysical systems and the attributes of institutions [fit], on interactions between and among discrete institutions [interplay], and on the prospects for scaling up/down in the dimensions of space and time in our efforts to understand the roles that institutions play in causing and confronting environmental change [scale].”

After ten years of work, a synthesis conference was organized, a book of findings published, and a new round of planning for the next ten years initiated.

Such has been the recurring cycle of Young’s professional life: define a theoretical direction, launch a collaborative initiative or center to promote the exchange of ideas and define directions of inquiry, perform and assess the work, synthesize the knowledge, and start again at the next level.

Young came to the Bren School in January 2003, a move that was a natural extension of his increasing interest in creating more interplay between science and policy. At Bren, he teamed with his longtime colleague, environmental lawyer Durwood Zaelke, to found the Program on Governance for Sustainable Development, which, Young says, has influenced the path of research on governance in the global-environmental-change research community, made strides in addressing the issue of compliance with international agreements, created relationships with scientists and policy makers in China, and, perhaps most importantly, strengthened efforts to demonstrate the value of science to policy.

“For a long time, we have lived with a philosophy articulated at the end of World War II in the catchphrase ‘Science: the endless frontier.’ It popularized the notion that science is curiosity-driven; scientists do the research, and later on, the results somehow find their way into policy applications,” he says. “Today, we are increasingly engaged in a discussion about how we can formulate a new social contract between science and policy. The essence is that there ought to be some interaction between the two communities from the stage of developing a research agenda on through generating the new knowledge and into the phase of saying ‘Here’s how our conclusions apply to relevant policy issues.’

Young remains involved in a great many processes, and while he may have assumed emeritus status, he seems unlikely to add “retired” to his title any time soon.
2002
Jonathan Saben (MESM) and his wife, Abigail Murphy, are pleased to announce the birth of their daughters, Sydney Lynn Saben and Madison Rose Saben. The twins were born on May 9, 2011. Jonathan is an attorney at Folger Levin LLP in San Francisco.

2004
At the end of July, Annette Killmer (MESM 1999, PhD 2004) relocated to Brazil, where she will work with national and state governments as they seek to improve management practices related to conservation areas, coastal resources, (eco-) tourism development, and their approaches to other environmental management issues.

Megan Schwartz (MESM) gave birth to her second child, Henry Samuel Schwartz, on March 23. She and the family are living in Los Angeles, where she works for Cardno ENTRIX. Megan was recently promoted to Senior Project Scientist.

2005
Katie DeLeuw and Josh Miller (both MESM) married in 2008 and now announce the birth of their first child, Declan James Miller, born on July 2. The family resides in Seattle, where Josh works as an environmental scientist at RH2 Engineering.

In June, Sarah Schliemann (MESM) received her PhD in forest and wildlife ecology from the University of Wisconsin, Madison. Her dissertation focused on the impact of disturbance, in the form of logging or natural tree falls, and Katie is on leave from her environmental communications position at EnviroIssues.

Kate (Sanden) Gentles (MESM) and her husband, Matt, welcomed a new son, David Robert Gentles, on February 7. He is a hit with his 2½-year-old sister, Sierra. Kate has left her position as an Associate Project Manager at PBS&J (now AtkinsGlobal) in San Diego to spend time with her newborn.

After six years as a consultant to utilities at ICF International, Kapil Kulkarnik (MESM) is now with Burbank Water and Power. He designs and analyzes energy-efficiency programs. Outside of work, Kapil and his wife, Sonali, are busy raising their two-year-old son, Akash.

2007
Nick Kordesch (MESM) has been promoted to Marketing and Communications Specialist for the Natural Resources division at Scientific Certification Systems (SCS). SCS is the leading Forest Sustainability Council certification body in the U.S. and was also the first company to earn Marine Stewardship Council accreditation.

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2008
Jessica Spence (MESM) spent the 2010-11 academic year in India as a Fulbright-Nehru Research Fellow. She studied adaptation to climate change in rural communities that depend heavily on natural resources. Working with the New Delhi-based Energy and Resources Institute, Jessica investigated the specific context of ecosystem-based adaptation in India on multiple scales.

2009
Tyson Eckerle (MESM) and his wife, Jenn, welcomed their first son, Shepard Taylor, on May 31. Around that time, Tyson was promoted to Executive Director of Energy Independence Now, a nonprofit focused on ending oil dependence in California.

After completing her two-year Presidential Management Fellowship with the US Forest Service, Lara Polansky (MESM) converted to a permanent full-time position as a Regional Sustainable Operations/Climate Change Coordinator in the Region 5 office in Vallejo, California.

2010
Ariana Arcenas (MESM) and Chris Utley were married on April 30 in Santa Barbara County. Both took the new last name Arcenas Utley. Ariana continues to work as a Corporate Responsibility & Sustainability Specialist at Deckers Outdoor Corporation; Chris is completing his PhD work in electrical engineering at UCSB.

LeeAnne French (MESM) was named Associate Director of the UCSB Carsey-Wolf Center, where she works at the intersection of academia and the media industries to promote research, teaching, and public programming about media industries.

Gabriel Sampson (MESM) left his position with Resources for the Future to pursue a PhD in environmental and resource economics at UC Davis, beginning this fall. His initial research will involve the economic and biological mechanisms needed to respond to rapid environmental changes.

Aaron Wdowin (MESM) was part of a California Solar team that worked with UCSB to install a 72-panel Heliolec solar pool-heating system. The product, which has been used in pools at the past three summer Olympics, is expected to save the university hundreds of thousands of dollars and more than a million pounds of avoided CO2 emissions over the 25-year life of the system.
In 2007, Helene Marsh (MESM 2004) moved to the San Francisco area and launched a search with her partner, Don Love – first for a house to buy in Marin County, and then for a lot on which to build. They finally settled on a small plot of land in the bayside town of Tiburon. “It was long and skinny and occupied by an old 1200-square-foot home that was described to me as ‘move-in ready’ but was actually smelly and vile,” she recalls.

Two years later, that house is a memory, replaced by a gleaming, space-efficient LEED Platinum-certified home distinguished by clean modern lines and a series of green features that could make a sustainable-building wonk weep.

Marsh’s platinum journey began while she was living in the former Soviet bloc nation of Czechoslovakia. “It was after the fall of the Soviet bloc, and I saw the environmental degradation in many areas,” she says. “Then I came to Santa Barbara in 1998 and saw how pristine it was here compared to central Europe. It made me want to understand more about the environment. I found the Bren program, but my kids were one and three and I was going through a divorce, so I waited until 2001 to start, when I could manage better.”

Marsh, who has always been interested in architecture and green building, took a class on the subject at Bren and then “put it in the back of my mind, thinking that if I were ever to build a home, I’d like to do it the right way.”

She graduated, moved north, found her hillside plot, and set to work on what would be a full-time job for the next two years.

“It was a real intellectual exercise for me,” she says. “The experience of going through the academic courses at Bren helped me to take on the research approach to this project because I had been taught to drill down and not take information at face value. I really used my analytical skills.”

She hired a San Francisco–based architect, Lewis Butler, who shared her modern design sensibility, and a contractor who had completed a LEED Platinum house in Oakland. Her goal was ambitious: “If it took 92 points to be Platinum, I wanted to be in the 110 range,” she says.

The first step was to deconstruct the existing house piece by piece, saving the old lumber and donating it to re-use facilities or organizations similar to Habitat for Humanity. She then tore out the old driveway, which had to be re-graded to meet a local ordinance, leaving her with a mass of broken concrete.

“I was tormented by this huge pile of concrete,” she says. “I kept thinking, What am I going to do with it?”

The solution came in the form of the retaining walls she needed for the driveway and the back yard, and involved building not a wall, but a series of linked galvanized-steel “cages” that could be stuffed with the old concrete, then faced with new stone to make them attractive. Now, the curving 3-foot-deep, 6-foot-high caged-concrete stone wall runs attractively along the whole 120-foot-long driveway, with another edging a 50-foot stretch of the back yard.

The 3,973-square-foot house was sited to take advantage of natural airflow and light. The eaves extend out from the walls far enough so that when the sun is high in summer, the interior is shaded. But when the sun is low in winter, it hits a four- to six-foot-wide band of the interior floor, warming the lightweight concrete, which also has a solar-heated radiant water-tube system running through it. The concrete then releases the heat throughout the evening.

“The result is a nearly constant temperature,” says Marsh. “It can be 95 degrees outside and the house might get to 80. You don’t get the stifling heat or unbearable cold.”

Marsh purchased everything she could from within a 500-mile radius of her home and used FSC-certified wood.
for everything from framing and siding to cabinets. All steel in the house is 80-percent recycled, the concrete contains 30- to 35-percent fly ash (a residue of coal combustion), and the walls were made from Eco Stucco, lime-based plaster that absorbs CO₂ as it dries.

Solar panels are used to generate hot water, with a rarely needed on-demand gas heater available for winter duty. A separate 5kW photovoltaic system provides enough electricity in the spring through fall that Marsh receives a monthly credit from Pacific Gas & Electric.

The house has three water-reuse systems. A first captures rainwater to flush toilets and run the washing machine. A gray-water system captures water from the bathroom sinks, the showers, and the laundry and then disperses it into the yard through a drip irrigation system, including under the no-mow lawn. The third captures spring water that had been spilling onto the driveway year-round and pumps it to the gray-water system.

The house was one of two homes in the Bay area to receive a 2011 American Institute of Architects (AIA) award in the category of energy and sustainability, and Marsh has opened it to the public on several occasions.

"I want it to be a showcase for people who are interested in what you can do in the green-building dimension," she says. "I want to host environmentally oriented people who are doing interesting work and can interact and network here."

The award pleases Marsh, but she’s even happier with the house’s livability.

"It’s exciting to walk into it every day," she says. "It’s comfortable, the climatic experience is great, and the views are amazing. I get satisfaction knowing that I’m using all my space every day. The objective was to create a beautiful, comfortable home without it screaming ‘earthy, crunchy,’ and we did. It’s sophisticated and also top-of-the-line LEED.

"It has been a fascinating journey and it’s all thanks to Bren," she adds. "It was an inspiring program, and as a result of getting my degree, I understood more about environmental science, climate change, and the built environment. I came away thinking about what I could do to walk the walk within the framework of my responsibilities in life. I see the house as a platform for other things I’ll do."

Bren alumni are welcome to come visit the house, which can also be viewed at www.tiburonbayhouse.com.