Collegial Collaborations

On today’s college campuses, students are spending less time sitting in auditoriums passively listening to lectures and more time putting theories to the test in projects, interning in their fields of interest, studying abroad, and learning to think, speak, and write critically. In many cases, the courses being taught are interdisciplinary, giving students a broader approach to the subject matter by exploring how different disciplines interrelate. This is not your father’s liberal arts education.

At the University of Hartford, this trend is anything but new. For more than 30 years, interdisciplinary learning has been a presence on campus, beginning with the very successful acoustical engineering and music program in the College of Engineering, Technology, and Architecture (see pp. 12-13). Since the 1970s, students in this major have combined the skills of a musician and an engineer.

But that’s not all. Since 1987, students have been taking courses in the All-University Curriculum (see below), a groundbreaking program designed to introduce them to multiple disciplines and to present multiple perspectives on a given topic.

As the University becomes even more interdisciplinary in focus, faculty in different schools and colleges are collaborating more. Sometimes the collaboration takes the form of a one-time project, but in other cases, it results in a new course, a new program, or even a new degree.

Not to be outdone, some students at the University have incorporated the idea of interdisciplinary study into their college experience by becoming dual majors. The University’s trademark offering of a small liberal arts college with the creativity and intellectual vitality of a university helps students accomplish this goal.

Daniel Hultgren ’09, for example, will graduate in May with two degrees—a Bachelor of Science in Physics and a Bachelor of Arts in Philosophy—as well as a minor in mathematics. Hultgren, who says he plans to study the philosophy of science in graduate school, explains the advantages of his choice.

“I enjoy synthesizing disparate disciplines. I see [the dual-degree approach] as the best way of creating novel ideas and finding unexplored intellectual territory. Secondly, it provides a wider range of options . . . when it comes to choosing a career. No one should let the extra work intimidate them.”

Following are some highlights of how interdisciplinary learning is growing at the University of Hartford.
Some of the students in Natacha Poggio’s spring 2008 Issues in Design classes initially grumbled about their assignment. Poggio, assistant professor of visual communication design at the Hartford Art School, presented her third-year students with quite a challenge: design an educational campaign for people in a village in India, using images but minimal text to overcome literacy limitations.

“It was definitely a huge challenge,” says Constanza Gowan-Segovia ’09. “It was really strange to not be able to use text and not [to know the culture].”

The idea for the campaign came to Poggio when she read about a project in the College of Engineering, Technology, and Architecture. Engineering students had formed a student chapter of Engineers Without Borders (EWB) and, under the direction of Associate Professor David Pines, had designed and installed a solar-powered ground-water pump system as a sustainable source of drinking water at a girls’ school in Abheypur, a village near Delhi in India.

Poggio recognized an opportunity to educate the villagers on the benefits of the new technology installed by the engineers. She contacted Pines, suggesting an interdisciplinary collaboration with her class, and he enthusiastically agreed.

The students began by designing a logo or character and then using the character to create three poster designs (to help instill values of cleanliness, sharing, and respect) and an outdoor mural for the school. From there, the students could come up with additional ideas for getting the messages across, including T-shirts and activity books for the young girls.

But before they could design anything, Poggio’s students had to try to educate themselves about India and its cultures.

“We had to do a lot of research first and not just start sketching, like we normally would. And we had to think more practically and really shift our approach,” says Gowan-Segovia. “For most of our assignments, we play with text and make things look pretty, but it doesn’t have anything to do with the real world. This does.”

The two sections of Issues in Design formed teams and set to work coming up with several concepts for the engineering students to show to the villagers on their return trip to Abheypur in August 2008. The plan was for these students to bring feedback from the villagers on their preferences so that the campaign could be refined and finalized during the fall semester.

“We didn’t know which one they would pick,” says Jessica (Parker) Hu ’09, a media arts major. “It was good to hear what they didn’t get. We really needed the feedback. No matter how much research you do, you still don’t know the culture.”

Seven students from the original Issues in Design classes volunteered to see the various ideas through to the final campaign. In addition to Gowan-Segovia and Hu were Ashley Gummelt, Kim Herrmannsdoerfer, Tomasz Kazmierczak, Jackie Minkler, and Alex Sangeorge.

“My students are using the power of design to make a positive impact on society: helping real people, solving real problems,” says Poggio. “This project is a vivid example of the potential art and design have for transcending geographic boundaries and disciplines, to be involved in humanitarian causes traditionally served by the worlds of medicine and engineering (like EWB and Doctors Without Borders).”

As the Observer went to press in early January 2009, Poggio and five students from the Water for India campaign left for India to deliver the materials they created and take part in painting the mural at the girls’ school. Funding for the trip came from the Women’s Education and Leadership Fund, the University of Hartford Student Government Association, and the Hartford Art School.
The Marriage of Music and Engineering

Carlos Rivera ‘99, who grew up in Puerto Rico, first visited the University of Hartford in 1994. Like many high school students, he hadn’t decided on a career yet, but he was leaning toward engineering.

The acoustical engineering and music program he discovered in what is now the College of Engineering, Technology, and Architecture seemed perfect, but he wasn’t sure he could qualify. With respectable SAT scores and excellent grades in high school advanced-placement mathematics courses, he felt comfortable about the engineering. It was the required audition at The Hartt School that made him nervous. “I was worried about my skills as a guitarist,” he recalls.

He needn’t have worried. With years of private lessons and training at the Conservatorio de Música de Puerto Rico behind him, Rivera recorded four classical guitar compositions that handily met Hartt’s rigorous standards.

With demand for acoustical engineers growing, the program’s graduates have enjoyed a 100 percent placement rate for several years. “We are typically contacted by more employers with job openings than we have graduates to fill,” says Robert Celmer, director of the acoustics lab and program.

Rivera is a good example. After graduation, he was courted by three different companies. He chose JaffeHolden, an acclaimed acoustical design firm based in Norwalk, Conn. “It’s an international company,” he says. “I knew that if I worked for them I’d have opportunities to travel and work on very high-profile performance center projects all over the world.”

And, indeed, Rivera has spent the past nine years consulting on acoustics for prominent facilities throughout the United States and abroad. You can hear his influence at such venues as Carnegie Hall’s Zankel Hall in New York; Chicago’s Harris Theater for Music and Dance; and the Hobby Center for the Performing Arts in Houston.

“Carlos is a rising star with our company,” says Russell Cooper ‘81, principal of JaffeHolden’s architectural acoustics division and himself an early alumnus of the acoustical engineering and music program. “He’s one of a number of University of Hartford graduates we’ve hired. The program prepares students very well.”

Its strength lies in its combination of theoretical courses and applied projects, according to Celmer. “Industries and communities all across the nation contact our acoustics lab for assistance,” he says. “The result is a win-win situation. Our students get hands-on experience, and the clients get their acoustics problems solved.”

Rivera, now a senior consultant with JaffeHolden, provided such an opportunity last year, when the firm designed acoustics for the new Mort and Irma Handel Performing Arts Center, a creative transformation of the former Thomas Cadillac property near the main campus.

Although the University made the decision to retain the outer brick shell of the Thomas building because it had been designed by noted industrial architect Albert Kahn, the interior was thoroughly reconfigured to encompass two black-box theaters, five movement studios for dance, and a number of smaller teaching and rehearsal rooms and faculty offices, each acoustically discrete. The project posed interesting architectural challenges.

Rivera recruited two engineering seniors, Craig Dolder ’08 and Chris Thompson ’08, to serve as on-site monitors. “They visited the site weekly, evaluated progress, and wrote reports for me,” he says. “I helped them learn the role of consultant, and they were immensely helpful to me.”

Dolder, now a graduate student at the University of Texas in Austin, is quick to acknowledge the value of the experience. “Working with Carlos was terrific,” he says. “It was the kind of real-world learning opportunity that makes the program so successful.”

Of his time on campus, Rivera says, “It was great to get back to the acoustics lab, too.” Completely renovated as part of the Integrated Science, Engineering, and Technology project, it now includes a much larger anechoic chamber and a reverberation room, a facility that didn’t even exist when Rivera was a student. “I was very impressed with the new facilities,” he adds.
Once The Hartt School’s Music, Theatre, Dance, and Community Divisions moved into the new Mort and Irma Handel Performing Arts Center, space opened up within the usually crowded Alfred C. Fuller Music Center. Out of the ensuing hurly-burly came a newly remodeled music recital hall.

Due to space constraints, Berkman Hall had been a dance and multipurpose room rather than a music performance venue for 15 years. With the Dance Division’s relocation, Hartt decided it was time to return Berkman to its original function.

Last spring semester, two students, Mike Lunoe ’09 and Nate Pape ’08 in the acoustical engineering and music program at the College of Engineering, Technology, and Architecture, created the acoustical design for the hall, which now holds 60 permanent seats tiered in stadium-style seating.

The students tackled the redesign of Berkman as their final senior project, working under the supervision of Robert Celmer, professor of mechanical engineering and director of the acoustics program and laboratory.

“The whole renovation project was a huge and exciting success,” says Hartt Dean Malcolm Morrison. “Our faculty and students all agree that the acoustics are excellent and that this state-of-the-art recital hall is a very welcome addition to Hartt’s performing spaces.”

The renovations were made over this past summer by Smith-Edwards Architects.

For Your Listening Pleasure

CETA acoustics students help renovate Berkman Hall

With the fall 2000 semester, the University began offering courses in a new, interdisciplinary major, now called multimedia Web design and development (MWD²) but originally introduced as interactive information technology.

Approximately 60 students are currently majoring in MWD², which is associated with the University Studies division, rather than a single school or college, due to its cross-disciplinary nature. The program differs from the more theory-based computer science major and the more business-oriented management information systems minor. While incorporating aspects of both, the Web-oriented MWD² major focuses on the technological, social, economic, artistic, interactive, and global aspects of the Web.

In addition to core courses in Web development and Internet programming, students take courses in design, business, technical writing, communication, and psychology in the Hartford Art School, the Barney School of Business, and the College of Arts and Sciences. Graduates are more than programmers and are able to pursue careers in areas such as Internet marketing, usability testing, multimedia development, and more.

An important feature of MWD² is the specialization requirement designed to supplement the technical courses with classes in an area of interest. Students choose from media arts, network management or administration, marketing and advertising on the Web, and multimedia production; or they can design their own specialization in video production or the human/computer interface, for example.

“Hands down, I would recommend this major,” says MaryLynne Schaefer, a senior in the MWD² program with a specialization in technical writing. “I really think it gives individuals an opportunity to use their imagination. The program is up to date on the latest technology, and the professors really know what they are teaching.”

Above are two samples of video games developed by students in the MWD² program.
Collaboration is most often a means to an end, but at the University’s visual and performing arts schools, interdisciplinary collaboration itself is the art.

Gene Gort, associate professor of media arts at the Hartford Art School, and Ken Steen, associate professor of composition and theory at The Hartt School, have taken their students out of the comfort zone of traditional studios and solitary work. Instead, the students collaborate in a cyber studio, where they use sound and images contributed anonymously to produce inspired, if not surprising, results.

“It was interesting to see and use what students from another class created,” Fearn says. “The fact that the pieces belonged to art school students connected us all together across the campus lawn—a truly hip concept. What is more, the website connecting us all . . . is fascinating in its own right.”

Certainly, Gort and Steen are pleased with the reception their approach to collaborative art has received. As Gort says, “What I find most interesting about the collaboration effort is that students respond to each other’s work and not to personalities. . . . Part of what we wanted to do was jump over the ego and really look at the artistic and creative sensibilities.”

Steen assigns two New Media Collaborative projects a semester to students in his Music Technology II and Intro to Computer Music classes. Their works and those of students in Gort’s Sound, Image, Text class are available for anyone to see, hear, and participate in at uhavax.hartford.edu/nmc.

“We use the website more casually now in terms of classes. We don’t do the collaborations in a strict, in-class curriculum form,” Gort says.

Both professors agree that there are obstacles to collaborative teaching inherent at any university. “We are trying to find a way to bring the schools together despite the hurdles of everyday life at the University,” Steen says. “There are many [considerations]—meeting times, grading, class space—just in the way a university is set up. Those are the boundaries we are trying to break through. What the Web has allowed us to do is find a meeting place.”

Steen and Gort are interested in connecting other disciplines to the New Media Collaborative—writing, engineering, and biology, for instance.

“My job, like all teaching,” Gort says, “is to open our students to the possibilities. They take it from there.”
Center for Integrated Design

Its mission is to provide Hartford and surrounding communities with resources and solutions that address engineering, architectural, business, and visual communication design (VCD) issues. Faculty combine their professional expertise and experience with the enthusiasm and creativity of their best students to provide a collaborative and interdisciplinary approach to community planning, design, and education. Its name? The Center for Integrated Design (CID) at the University of Hartford.

Created during the spring semester of 2003, CID’s first project addressed the future development of the Bloomfield, Conn., town center. Faculty-student teams gathered data on existing conditions, such as architectural styles, lighting, and traffic patterns. A focus group provided information on what town officials and residents thought of the center and what they thought would increase its vitality. In the classroom, students worked on design studies (architecture), signage (VCD) and lighting, utilities, and traffic patterns (engineering), for example. In spring 2004 a final report was submitted to the town with detailed recommendations to create a town center that was more of a destination than a drive-through.

“Our value is in the early phases of the process,” says James Fuller, associate professor of architecture in the College of Engineering, Technology, and Architecture (CETa). “We are a resource for research done by a collaboration of faculty and talented students. But the projects have to meet our curriculum goals.”

Other involved faculty members include David Pines, associate professor of civil, environmental, and biomechanical engineering, and Jeffrey Cohen, associate professor of economics in the Barney School of Business. Also part of the CID team are Terri-Ann Hahn, an adjunct professor of architecture and a practicing landscape architect, and Nancy Wynn, a former assistant professor in the Hartford Art School and professional graphic designer.

In a project with the Capitol Region Council of Governments, CID is working with the towns of Bloomfield, Manchester, South Windsor, and Tolland; the Partnership for Strong Communities; and the American Farmland Trust. This team received one of three grants awarded nationally in 2008 from the Environmental Protection Agency. The grant will fund a three-day workshop in early 2009 to develop regulations and guidelines for towns for incorporating affordable housing in urban, suburban, and rural contexts.

In this project, for example, engineering students will be looking at traffic patterns, storm-drain runoff, utilities, and transportation, while Barney students will be analyzing the economics of affordable housing in a mixed-use environment. Architecture students will create visuals of design and planning guidelines for the housing.

Future projects include a community center in the Upper Albany neighborhood in Hartford and an energy and green-design study for a major residential community in Farmington, Conn.

A Cross-University Collaboration

Students will have a chance to make a difference in Kenya

In a project spearheaded by Provost Lynn Pasquerella and Associate Professor David Pines of the College of Engineering, Technology, and Architecture, the University of Hartford has embarked on a new, multischool endeavor to help improve the quality of life in western Kenya, near Lake Victoria.

The Africa Center for Engineering Social Solutions, or ACESS, was founded by Clarice Odhiambo as a way to help the people of her homeland. This nongovernmental organization works to give Africans the resources they need to help themselves. The University will be joining Brown University, Dartmouth College, the University of Rhode Island, Rhode Island School of Design, Hampshire College, and others on the project.

“In my field, engineering, college students work on senior projects to earn their degrees,” says Odhiambo, a former chemical engineer who designed products for Unilever and Coca-Cola for Africa. “At the end of the year, these projects are discarded. Why not instead bring students to Africa to create and implement projects that would help solve Africa’s problems?”

Pines—who has been working with engineering students to bring a reliable source of drinking water to villagers in Abheypur, India—will bring his engineering expertise to Kenya during a two-week visit in summer 2009. ACESS is recruiting students, regardless of their majors, to address issues from literacy to health to economics and others.

In July 2008 the first group of students and faculty research teams went to Kenya on a fact-finding trip. Pasquerella was accompanied by Teagan Rosendahl, now a first-year student at the University.

“The Kenya project offers an extraordinary opportunity to demonstrate the University’s commitment to serving as a private university with a public purpose,” says Pasquerella. “By engaging in interinstitutional, international service learning using teams of faculty, graduate students, and undergraduates, we are achieving multiple educational objectives.”