The ups and downs of curriculum design

If math and physics make you reach for the sky and scream, a new Short Term unit at Bates might help ease the anxiety.

Working with two math professors, senior Leslie Milk and junior Nate Stambaugh spent the summer creating a unit that applies math and physics to the design of roller coasters. Aimed in part to attract students skittish about subjects perceived as complex and abstract, the unit will demonstrate the practical science that keeps the cars on the rails, and the riders — however rattled they feel — safe.

And yes, field research aboard actual roller coasters will be part of the program.

“I think there are enough students who are just excited about roller coasters to overcome any fear they got in high school of math,” says Stambaugh, a double major in physics and math. “This will be a nice way to coax people into the department.”

Support for the project came from the Howard Hughes Medical Institute as part of a national grant program designed, in part, to bring more students into math and the sciences. Since 1991, the college has received five grants from the institute, including one this year for $1.2 million.

“Hard science indeed. In her historical research for the project, Milk learned that early roller-coaster designers attempted to introduce perfectly circular loop-the-loops into the track — which, due to the forceful change in direction at the start of the loop, broke the necks of some riders. An elliptical loop that introduced the change in direction more gradually solved that grue-some problem.

Now, having studied roller coasters, Milk says, “it’s nice to know that modern designs are actually a lot safer than they feel — and that’s because of the physics.”
Fulbrights fuel pursuit of passions

Thanks to the Fulbright U.S. Student Program, a federal program supporting research abroad, two Bates graduates are in Asia studying topics in music and art until May 2005.

Michael Roberts ’04 of Longmeadow, Mass., is traveling through Mongolia to research the horse-head fiddle, a traditional instrument that is a national symbol for the Mongolian people.

Cristin McKnight ’02 of Los Angeles is living in South India and researching traditional “kalamkari” textiles.

The Fulbright covers their travel costs and affords a monthly stipend. “It is such a prestigious award and the competition is so stiff,” said Roberts, who went to Mongolia in August. “I couldn’t have done it without the help of a few Bates professors who pointed me in the right direction” — such as Steve Kemper, an anthropology professor who alerted him to the Fulbright opportunity.

A double major in music and anthropology, Roberts is a talented and versatile musician who performed with several college and student bands at Bates. He first encountered the horse-head fiddle during an autumn semester in Mongolia in 2002, hearing it while staying with a family in Ulaanbaatar, the capital. “I fell in love with it,” Roberts says.

As for McKnight, she explained that “kalamkari” refers to a traditional technique of painting fabric with dye and, specifically, to wall-hangings with mythological or religious images made from such cloth. “I’m examining the way older traditions and techniques have informed contemporary practice of the art,” McKnight said.

McKnight, an art history major, first studied in India during the spring semester of her junior year. Since graduation, she has done gallery and museum work in Los Angeles while studying fabric design and the Hindi language. She hopes to combine curating, teaching and textile design — concentrating on Indian practices — in her career.

In Bangalore, where she lives, her circle of acquaintances includes the mother of a friend from Bates. “The Bates family really does extend around the world,” she said.

Friends rank first

Gary Kan knew he wanted to play collegiate squash long before he finished up his prep school career at Taft. The only question that remained for the Hong Kong native was where.

Kan got a list of colleges with great academic reputations and squash programs from his coach and his college counselor, and after visiting Bates and meeting the members of the squash team, knew he had found the right place.

“They were all very friendly, and I felt like we could be good teammates,” Kan says. “I knew this team could be fun, challenging and exciting. The team factor was a huge consideration, and the academic prestige was a big factor in convincing my parents.”

Kan had a tremendous rookie season for the Bobcats, going 17-4 at the No. 2 spot and finishing the season ranked 61st nationally. But individual accomplishments don’t drive Kan, who thinks of the Bates squash team like a big family, humorously referring to head coach John Illig, a free-spirited yet fiercely competitive mentor, as the “funny grandfather.”

“Friendships are much more important and meaningful than any rankings and titles,” Kan says. “It’s no longer just me. Everything I do will affect the team, and that makes me work hard because I know that all my teammates are taking what we do very seriously.”

IMPORTANT DATES

Mount David Summit: April 1, 2005
Spring BPFA Meeting: April 2, 2005
Commencement: May 30, 2005
Convocation: September 5, 2005
Parents & Family Weekend: September 30–October 2, 2005
Getting to Know Bates
By Pat Mahon P'05,'07

As my son, Tom Hayden '05, entered Bates, I gradually devised my own combination of reading, experiencing and participating for getting to know Bates. Now that my daughter Monica '07 is at the College, I am still learning.

Reading Everything
Parents & Family Handbook: Mailed to families every fall, it's chock-full of information. I skim it every year and then keep it as a resource. Where else can I learn how to order birthday cakes, what I need to know about Junior Year Abroad, and why “dorm damage” appears on my bill?

The Bates Student: The student-run newspaper, published weekly, lets me in on campus discussions, student opinions, visiting speakers, arts and sports news.

The Bates Web Site: Also keeps me current on news and events, faculty research, The Campaign for Bates updates — and much more. The parents handbook is online too. Visit www.bates.edu.

Experiencing Bates
Weekends at Bates: At our first Parents Weekend, my son and some friends arranged a dinner with their parents, and included friends whose parents couldn’t come. Now that weekend is our favorite time at Bates each year. (And we learned to make hotel and restaurant reservations earlier — for any time we plan to visit.)

Meeting Their Friends: My eyes opened up as we walked across campus during my son’s sophomore year. He greeted students left and right (“What’s up, dude?”) and they responded in kind. That showed me how much I didn’t know — something confirmed last summer when 35 Bates friends visited for a weekend! Actually, our kids’ friends probably know us best for the cookies we keep sending.

Bates and Learning: Depending on your child, it can be easy or hard to learn about classes and professors. So we like to go to lectures and attend open classes while visiting Bates.

Participating as a Parent
Parent Committees: I was slow to volunteer at Bates, but in fact you can give whatever time and interest you have. Telephoning parents of new first-years is easy, for example, because they ask the same questions I did. And now I know the answers, or where to find them. To learn more, contact Marianne Nolan Cowan ’92, Parents & Family Association, at: mcowan@bates.edu

Volunteer Fellows match the ability with the need

If you get people interested in helping even just once,” says Brooke Miller ’07, “that makes a huge difference.”

Miller is one of four Student Volunteer Fellows at Bates. Their job is to match students with volunteer opportunities in Lewiston, Auburn and other communities in the region.

Administered by the Center for Service-Learning and now in its third year, the program has involved hundreds of Bates students in dozens of projects — projects as diverse as reading with elementary-school students, tutoring senior citizens in computer use at Blake Street Towers and helping refurbish local housing with the Rebuilding Together program, a national initiative whose local chapter was established by a Bates student.

“It means more to the community that Bates students, rather than professors or administrators, are creating opportunities to volunteer,” says another Fellow, Sara Gips ’07. “I’m really proud of that.”

Volunteer fellow Meghan Thornton ’05 tutors at a Lewiston school.

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Before making their annual descent, vibrantly colored leaves cover an immaculate Historic Quad during Parents & Family Weekend.