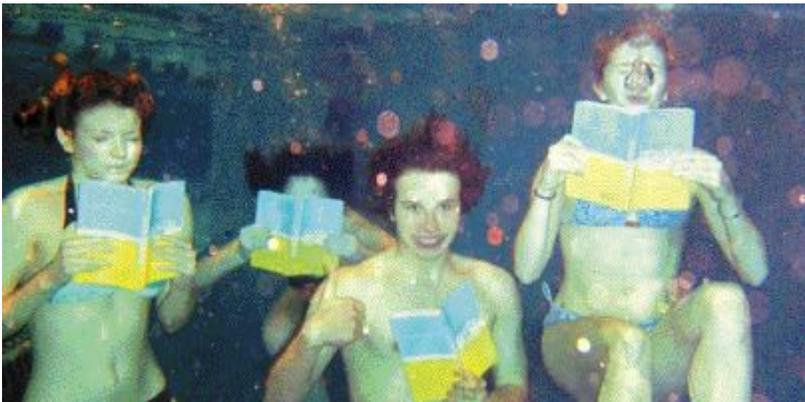




DAVID BEBEE, Record Staff

(Left to right) University of Waterloo student Kyrie Vala-Webb, Systems and Design Engineering Professor Ed Jernigan, Ryan Voisin and Vanessa Minke-Martin hold pieces of an amplifier and a hairdryer they have taken apart for a course in their Bachelor of Knowledge Integration program.



Ryan Voisin photo

(Left to right) University of Waterloo student Kyrie Vala-Webb, Systems and Design Engineering Professor Ed Jernigan, Ryan Voisin and Vanessa Minke-Martin hold pieces of an amplifier and a hairdryer they have taken apart for a course in their Bachelor of Knowledge Integration program.

Pushing boundaries

UW program challenges students to take risks and think outside the box

BARBARA AGGERHOLM
RECORD STAFF

You're given a textbook about nature-inspired design that claims it's waterproof.

So you read it, right?

Well, yes. But if you're students of the inaugural Bachelor of Knowledge Integration program at University of Waterloo, you don't stop there.

You dive into a pool and you study the book underwater, page by soggy page. You're curious whether the recyclable "treeless" book, made from plastic resins and inorganic fillers, will survive your test.

If the book survives, you'll get down to work on your assignment to create a sustainable product -- say a diaper that decomposes entirely -- that actually improves the environment.

If the book is a mess, you'll put together the hair dryer you tore apart for another course, and hope it works on the pages.

This is UW's first Bachelor of Knowledge Integration class -- bright students who like to push the boundaries of learning.

They're in this arts and science program because they want to learn about many disciplines, not just one.

They look at relationships between disciplines, between ideas, between just about everything.

"They're really cool. They've got that insatiable curiosity, a variety of experience," says Paul McKone, senior design demonstrator of the Centre for Knowledge Integration which oversees the undergraduate program. "They're well-developed, diverse and interesting kids."

They're students who take academic risks, think outside the box on course assignments.

They don't freak out -- not much anyway -- if you ask them to make connections between a haiku about cicadas and an unusual illustration.

"The sound in the classroom was jaws dropping," student Vanessa Minke-Martin, 20, says about the cicada assignment. "But then you go out on a limb. You find something interesting and something neat. . . . It's an important way for us to learn there isn't a right answer."

As the first year of the new bachelor program winds up, Ed Jernigan, a systems design engineering professor who created the program, is looking ahead.

He and his colleagues are planning events for this week's Waterloo Unlimited program, a unique enrichment opportunity for motivated, well-rounded high school students.

These high school students, and those in the month-long Shad Valley program which focuses on technology and entrepreneurship, are just the kind of students the new degree program wants to attract.

"A lot of students are strong across the board and are disappointed there aren't options at a university level that allow them to maintain that balance," says Jernigan, the centre's director. This program provides the answer, he says. Knowledge without specializing. At least, not yet.

"I don't know what I want to do with my life," says student Kyrie Vala-Webb, 18. "I don't know how I'm going to change the world . . . but I'm going to try."

In 2008-09, 35 students, all but one from Ontario, became the first class of the Bachelor of Knowledge Integration.

"Knowledge Integration is new and in economic uncertainty, people want some idea what the job is at the end of the day," Jernigan says. The beauty of this program, he argues, is that students will have more choice.

"Who knows what the critical specialty will be five years from now? Why specialize when you're faced with such severe uncertainty?" Today's companies are looking for individuals who are literate, articulate, collaborative and can draw on a broad range of experience and knowledge, he says.

Complex problems like climate change and the global economic crisis need people like these students.

"They give me hope for the future because they'll do neat things and ask questions and be unconventional," says Kim Boucher, the centre's associate director.

Some students will find jobs after the degree, Jernigan says. Others "see it as a first degree and plan to use it to discover their passion and go on to graduate school."

English, public speaking, critical thinking and ethics are among the subjects they take. They study a foreign language, computer science, mathematics, science and research design.

Core courses develop their skills for integrative thinking. They do hands-on design and research projects.

In third year, a "museum course" will give students a chance to design their own museum exhibit after a two-week field trip to a museum-rich community. In 2010-11, students will go to Amsterdam, Netherlands. Why museums? "It's the public face of knowledge," Jernigan says.

Students can choose half their program's courses from anywhere in the university. That appeals to students with diverse interests, such as one applicant this year who loves film studies and physics.

"It's nice for me because I don't like studying one thing," says Ryan Voisin, 19, who helped instigate the underwater textbook experiment. "Knowledge Integration gives me the opportunity to not close doors and stay connected with a bunch of different fields."

Vala-Webb knew she was in the right place during her first class when students were choosing subjects for a timeline. "Their topics ranged from explosives to biological developments to magic tricks to fashion," she said. "I did the notation of music.

"Everybody was so amazing. I was so excited to be studying with them."

baggerholm@therecord.com

The **R**ecord.com

<http://news.therecord.com/Life/article/504030>



© Copyright 2007 Metroland Media Group Ltd. All rights reserved. The reproduction, modification, distribution, transmission or republication of any material from www.thespec.com is strictly prohibited



without the prior written permission of Metroland
Media Group Ltd.

