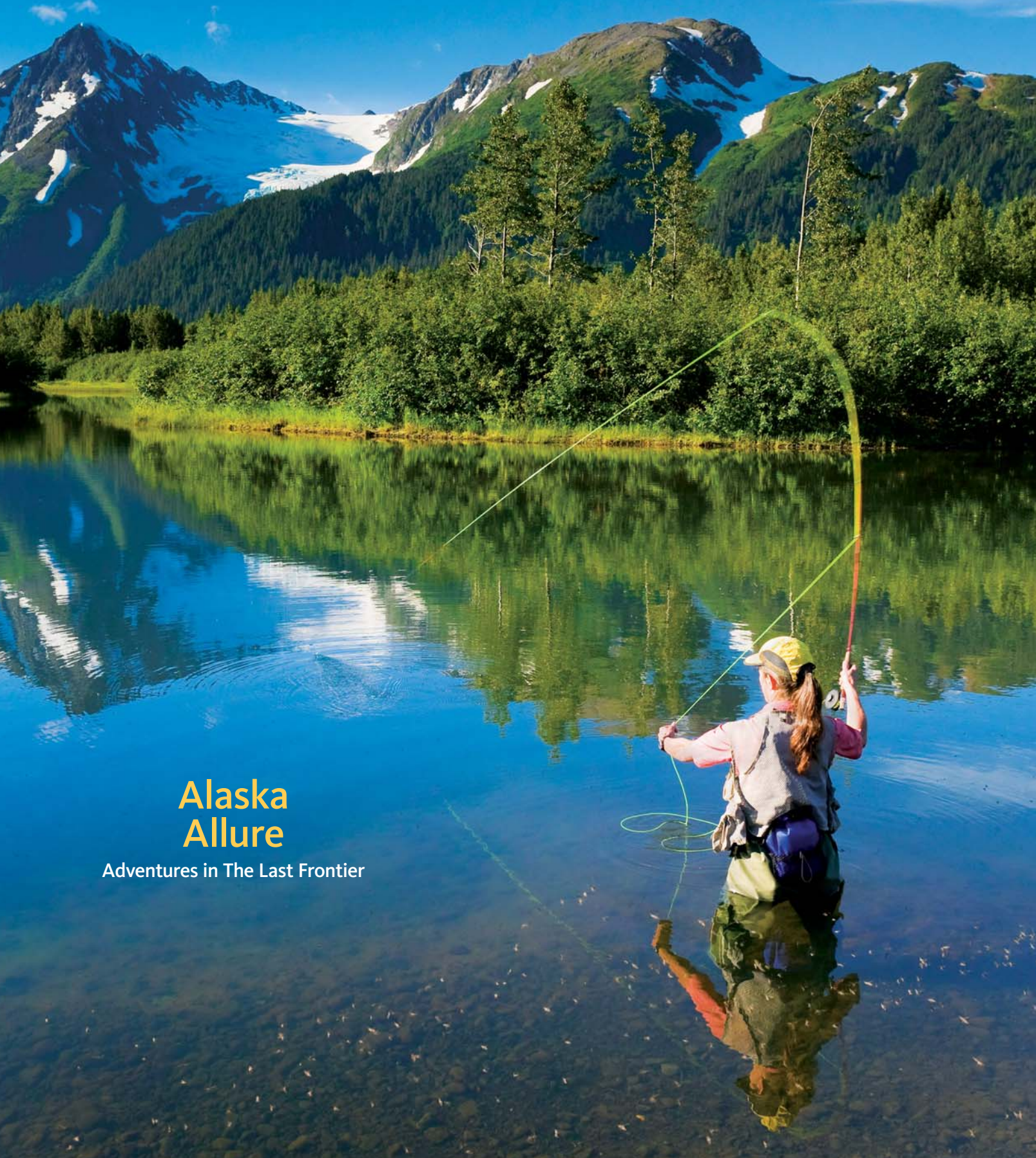# Alaska Airlines

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Adventures in The Last Frontier

Real-World Education

By Scott Driscoll

The ever-evolving global economy and the expanding influence of the Internet are presenting challenges for college and university students that may not seem familiar to their parents. ■ Long-sacrosanct educational approaches—emphasizing academic theory with limited real-world experience, or requiring students to focus on a few narrow subject areas—may no longer adequately prepare students for today's (or

tomorrow's) workplace demands, which often require creative problem-solving skills, an advanced facility with technology, and the ability to write and present boardroom-worthy reports. Many institutions of higher learning are responding to these changing demands by blurring the boundaries between the classroom and the real world, and are engaging with the business world and local communities.

"Three things will be important in the education of today's students for the new world," says Tom Roehl, professor of international business at Western Washington University in Bellingham. Roehl identifies these skills as the ability to process information from a variety of sources; the ability to deal with complexity, in terms of both working on more than one task and

tackling problems that have neither simple solutions nor clear precedents; and the ability to be comfortable with uncertainty, as problem-solving-related research will often redefine the problem and change the ultimate goals.

The process may be complicated, but the goal is clear: Students need to be able to think beyond the textbook and function outside the classroom in order to succeed in an ever-changing world.

One such effort is the Sustainable City Year Program (SCYP) at the University of Oregon in Eugene. "In the classroom, our goal has been to modernize higher education to better match the problems cities are facing," says Marc Schlossberg, a professor of planning, public policy and management, and co-director of the Sustainable

Cities Initiative, which sponsors SCYP. The program sends undergraduate and graduate students enrolled in regularly credited courses to a designated Oregon city to meet with city staff who identify problems that need attention. Since the program's inception in 2009, it has devoted more than 200,000 student work hours—from 1,300 students representing 13 academic departments—to addressing societal issues as diverse as climate change, industrial waste recycling and neighborhood revitalization.

In the program's second year, Oregon's capital city of Salem paid $350,000 to bring in nearly 500 SCYP students from 30 courses, to address issues such as how to redesign an abandoned industrial area along the Willamette River. "Our team's job was to wrestle with problems that weren't hypothetical," says Jessica Bloomfield, a program participant who was finishing a dual graduate degree in law and urban planning. Bloomfield's team tackled questions such as, Should that area be residential or an open park with planted trees? Could existing streets be reopened to bring people down there? Would there be room for a bicycle path?

Bloomfield's team prepared a final report and presented it to a panel of city staff members. "They were really excited—they asked a lot of questions, and they wanted to learn from us," Bloomfield says. "Working on our class project gave me the ability to talk to professionals about real problems."

The program's work in Salem also required business-school students to think creatively to solve a particular city problem while generating revenue. "The students looked at an industrial food-processing plant in Salem," Schlossberg says. A team of students matched the plant's food waste with an underused anaerobic processor, and developed a plan through which the captured methane produced by the waste could be used to generate electricity. The students wrote a business plan in which

they calculated that Salem would save $400,000 a year by utilizing this new power source; if all goes well, the students' plan will be adopted for use this year.

This project may have benefited the city of Salem, but it also gave students a better understanding of how to put their academic expertise into action. "When students test a theory in the real world, they bring that experience back to the classroom," says Doug Blandy, senior vice provost for academic affairs at the University of Oregon. "This allows them to concretize ideas in a way that makes the students that much more employable straight out of college."

The Project Center at Seattle University has been preparing engineering and computer science students for real-world challenges for more than 25 years. As part of a required senior-year capstone program for all students in these majors, students work on around 25 full-year projects with partners including the city of Seattle, Seattle City Light and King County. Recent projects have included the investigation of storm-water management, and hydrologic modeling for removal of a dam on the Elwha River.

At Lewis & Clark College—a small private school in Portland—educators are preparing students for future employment by bringing principles of entrepreneurship on campus. "We emphasize critical thinking and communication skills," says Tuajuanda Jordan, dean of the College of Arts and Sciences, who notes that students may not understand what additional skill sets an employer might require.

Jordan says the college is attempting to provide students with these necessary skills through a new entrepreneurship workshop, a one-week project first offered in 2012. (Currently in its testing phase, the program will eventually span an entire academic year.) This program offers up to 34 students an intensive course in how to start a nonprofit or business. Local business leaders and Lewis & Clark alumni teach students how to pitch an idea, how to develop a business plan and how to communicate that plan to potential investors. For the first five years, the program will

function as a series of courses that can lead to a certificate in entrepreneurship. Students can sign up for courses starting in their sophomore year. Eventually, entrepreneurship studies will be phased into the regular curriculum of all majors.

The program not only teaches students how to use their academic skills in the real world, but can provide real-world benefits. Beginning this spring, the program will sponsor an annual competition in which teams of students will present business proposals to a jury of Portland-area business leaders. Successful teams will receive startup funding—amounts vary, but awards may be in the tens of thousands of dollars—to put their business plans into action. The benefits are real, but the cost of failure is low, and students with an unsuccessful business plan will have received a valuable lesson in how to remedy their approach when engaging with businesses and investors after college.

"Starting their own business while in college means it's safe to fail," says Brian Detweiler-Bedell, associate professor of psychology and academic director of the entrepreneurship program. "They learn from that, and the next venture may be successful."

Some professors at Western Washington University—especially in the sciences and the College of Business—are turning to an approach called "flipped teaching," which presents information to students online and uses classroom time for addressing real-world applications. Using online management software called Blackboard, professors post recorded lectures (which may be more academic theory–oriented) for student review. "This frees up faculty to spend more class time placing the problems in the context of real-world examples," says John Farquhar, manager of WWU's Centers for Teaching, Learning and Technology.

Students in Tom Roehl's international-business-projects class engage in field projects with a variety of businesses, which gives the students real-world experience with academic guidance. Roehl's student teams have completed more than 100 projects since he started teaching the

field-project classes in 2000. Twice a year, he sends out student teams to tackle problems for local companies seeking to improve their international market. At the end of 10 weeks, the student teams present the companies with reports or product mock-ups aimed at solving real problems. "We do set guardrails," says Roehl, who meets with company representatives to define a project's scope. "Still, it's the students' responsibility to fail or succeed."

A 2006 class, for example, worked with Brunswick, a boat manufacturer with a facility near Bellingham, to boost yacht sales in Mexico by modifying the company's Internet presence. The WWU team analyzed similar business websites, researched the demographics of the company's target audience and developed a high-level website redesign.

Breaking down old barriers that have separated the worlds of academia and business doesn't, however, mean reducing a liberal arts education to professional training, says Amber Case, a 2008 Lewis & Clark graduate. After taking an upper-level "cyborg" anthropology course that studied the connection between humans and their tools, Case started a "Cyborg Camp" series of conferences, attracting programmers, artists, scientists and engineers. "You learn through discussing current and futuristic problems, with people gathered around a common interest," Case says. Since the first camp in Portland in 2008, the event has been replicated in Seattle, Toronto and Vancouver, British Columbia.

In 2010, Case used her education and the school's entrepreneurial lessons to found Geoloqi, a platform for software developers that allows a user on a mobile phone to access location-based information. In 2012, Geoloqi was acquired by the geographic-information company Esri. Case says the things she learned in college have wide-reaching benefits. "I went to Lewis & Clark because it's a school that teaches you to think," she says. "A good education is one that teaches you to think your way through whatever the world throws at you." ▲▲

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