

Hot Careers For 2010 And Beyond

■ By **ASHLEIGH OLDLAND**
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The Wall Street Journal recently published a list of “The Next Hot Jobs” that are destined for growth through the next decade. The Long Beach Business Journal decided to investigate a few of those jobs to see what it takes to bring home the bacon as a home-care nurse, artificial-intelligence programmer, adventure travel guide or fuel cell engineer.

Manuel Pérez, director of the career development center at California State University, Long Beach, (CSULB), agrees that he would encourage students to pursue any of the four career paths; he expects that they would be in high demand in Southern California as well as nationwide.

Home Health Care In Demand As Baby Boomers Age

The home-care industry is anticipated to grow since baby boomers are becoming senior citizens. By 2010, nearly 16 percent of the Golden State’s residents will be 60 or older, according to the California Department of Aging.

CSULB boasts a nursing program and recently broke ground on the construction of a new nursing facility that Pérez says will be “pretty exciting.” The \$4.3 million project is slated for completion in August 2010. “We just don’t have enough nurses,” Pérez explains. “That will continue as long as we are aging and living longer.”

Professionals at Senior Solutions Team Inc. agree that the need for nurses and home-care professionals is on the rise. Senior Solutions, which has been in business for nearly five years, hires certified nursing assistants, certified home health aides and companions to provide home-care services in Long Beach.

“The need is absolutely there in the community,” says Machel Thompson, geriatric care manager and owner of Senior Solutions.

Training for a career in home care as a



According to the California Department of Aging, nearly 16 percent of the state’s residents will be 60 or older by the year 2010, further increasing the need for home care and related services. (Photograph by the Business Journal’s Thomas McConville)

certified nursing assistant or certified home health aide is typically a three- to six-month process from the classroom training to the clinical training to the examination process, Thompson says. Certified home-care professionals earn between \$9 and \$13 per hour on average and may work part time or full time; companions earn minimum wage.

Paul Quiroz is the director of operations at Cambrian Homecare, which has provided nonmedical home-care services in the Long Beach area as well as other parts of Southern California since 1996. He, too, says that home-care services are increasing in demand.

“You have more people in that aging population and more people looking for independence in their home – most seniors don’t want to be transferred to a facility or

assisted living,” he says. “They have their home, and they want to stay.”

Home-care professionals with Cambrian must have positive attitudes and show that they have been dependable at their previous places of employment, but they do not need to have a medical background. Job training includes CPR certification and in-house training.

Quiroz says home care is an excellent job for retirees, stay-at-home parents or people looking for additional income. Typically, Cambrian hires part-time workers.

Teaching Computers How To Think

Another growing industry is artificial intelligence. From robotics to cyber security systems to medical technology to programming video games, experts say that the demand for AI programmers can only continue to grow.

Artificial-intelligence specialists program computers to “think” by using encoded information to tell computers how to deal with problems as humans might. According to the Bureau of Labor Statistics, in the year 2006, artificial-intelligence specialists earned an average of \$96,440 a year.

“It is just amazing what they can do with AI technology nowadays,” Pérez says. “I know a lot of employers are looking for students with that type of background – especially in the gaming industry for video games.”

Working to bring more AI into the curriculum at Long Beach City College is Lou Anne Bynum, assistant superintendent and vice president of economic and resource development. She also sits on the National Education Advisory Council for the Cyber Innovation Center in Louisiana.

“You can take a look at what is going on in general in business and industry, and the trend is all integration of electronic systems of some kind,” Bynum says. “As individuals, everything we do now is done electronically practically, from social networking to banking online.”

“There’s a projection for Los Angeles County that goes through 2012,” she adds. “There’s a 20 percent growth rate in IT jobs in general, and that is everything from software system application, specialists, database administrators, network systems, . . . forensics, virtual private networks, cyber ethics and the business side of it. It is a very significant, emerging need in education because of the emergence of technology in all areas of our life. There’s a gamut of jobs out there.”

City College already offers students AI experience including computer science, 3-D modeling, video imaging, digital imaging and robotics. But the college is expanding its reach into the world of artificial intelligence by participating in a Troops to College program (in partnership with CSULB, Boeing and other organizations) that will provide workforce devel-

opment in engineering and cyber-related courses for returning veterans.

Additionally, the college plans to host cyber camps for K-12 students to introduce them to the building blocks needed to proceed on an A.I. career path.

Blazing Trails In Adventure Travel

Another career expected to see growth – one more off-the-beaten-path – is adventure travel guide. National and international travel experts agree that travel – especially adventure travel – will continue to see increasing demand in the coming years.



Careers involving artificial intelligence are expected to grow in the next decade. AI specialists work with computers to design machines that “think” the way humans might. Career paths for AI specialists include robotics, cyber security, gaming and medical technology developers. (Public domain photograph)

Amanda Sundt is the chief marketing officer for iExplore, a Chicago-based company that was founded in 1999 and has become the number one-ranked Web site for adventure and experiential travel. The company specializes in adventure consultation, selling adventure travel packages to destinations such as Antarctica, Peru, Egypt, China, Thailand, Costa Rica and South Africa.

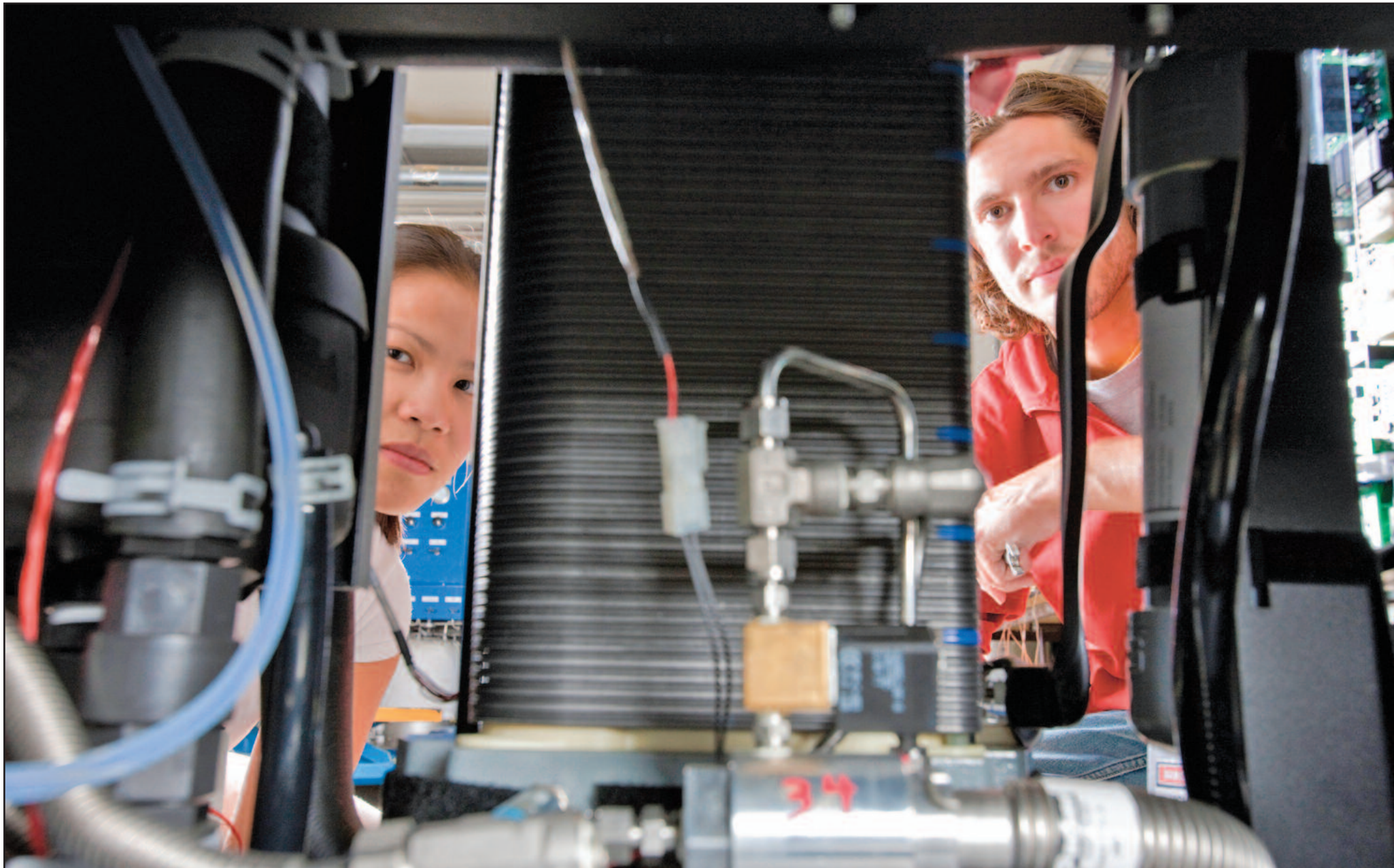
“What we’ve seen is that if people are

going to spend the money to travel, they want to make a really informed decision and make sure they are having the best possible experience,” Sundt tells the Business Journal. “Our consultants have traveled all over the world or in many cases have lived in other parts of the world and really bring a lot of firsthand knowledge and experience in destinations. From the consumer standpoint, . . . these adventure consultants really take the time to get to know the traveler and customize the itinerary based on their needs and preferences.”

Adventure consultants at iExplore are

full-time, salaried staffers; they do not make commission. Sundt says she looks for employees who have traveled extensively or lived in a different part of the world. Potential employees must demonstrate excellent people skills and communication abilities, but most importantly, “the desire to work with people to plan these trips of a lifetime.”

Sundt says the adventure travel business is growing.



National Fuel Cell Research Center students Hong Hoa Do, left, and Joshua Eichman look into a fuel cell system. They appear on either side of a fuel cell stack. Scott Samuelsen, right, is the director of the National Fuel Cell Research Center at the University of California, Irvine. (Photographs by Paul R. Kennedy)



“I would categorize fuel cell research as a green job because you are dealing with clean technologies,” Pérez says. “In the future of California, if I looked in a crystal ball, I would say that the biggest industry growth is going to be in green technologies.”

Established in 1998, the National Fuel Cell Research Center (NFCRC) at the University of California, Irvine is a forerunner in researching and educating future fuel cell professionals.

“One has to recognize that fuel cells are going to become ubiquitous throughout society in the next 30 years,” explains Scott Samuelsen, director of NFCRC.

Samuelsen cites environmental constraints such as global climate change and urban smog as the major factors in the rising popularity of researching fuel cell technology. He says that fuel cell research today is being applied to automobiles powered by hydrogen, portable electronics powered by methanol and stationary fuel cells powered by natural gas.

“Fuel cells have a lot of technology advancement to experience in the next 30-40 years,” Samuelsen says. “They work pretty well today, but there is so much yet to be learned about them and about integrating them into their application. . . . There is a lot of engineering to be discovered in the decades to come.”

“Energy is the lifeblood of society,” he adds. “From getting to work to turning on

the shower to turning on the lights. . . . We take it for granted, but a lot of good technology has gone into it. We face challenges in energy today. All these years, there’s always been a need for students in the energy field, and that is much more today because of the tremendous change that’s occurring from the generation of electricity to the design of the automobile and automobile fuel.”

Fuel cell researchers are typically trained in disciplines such as mechanical engineering, electrical engineering, chemical engineering or civil engineering; however, fuel cell researchers must be able to understand electrochemistry and be somewhat cross-disciplinary with their engineering skills. Fuel cell researcher salaries are similar to other engineering fields, but demand is high. According to the Bureau of Labor Statistics, chemical engineers earned a median salary of \$78,860 in 2006.

“There are a lot of positions that are open, and we can’t come close to meeting the demand that is there,” Samuelsen says. ■

“People want to do things that matter to them,” she says. “We’ve had a record year of sending customers to Antarctica, and what we’ve heard from our customers is that people are concerned about global warming, and they want to see the glaciers before they melt.

“The destinations that we sell are truly once-in-a-lifetime destinations, so we see people planning for a milestone birthday or retirement or a shared family experience.”

The adventure travel experts at Gap Adventures – which is the world’s largest adventure travel company and boasts

numerous awards for its global leadership in adventure and sustainable travel – agree that the travel market is expanding.

“For someone to work [in this industry], the draw for them is to be in the fastest-growing sector of the travel industry,” says Bruce Poon Tip, founder and CEO of Gap Adventures. “It is very exciting and very entrepreneurial, and it is for people who have a curiosity to see more unique corners of the globe. It is for people who have a curiosity to see other parts of the world and meet other people – a curiosity for culture.”

The company, founded in 1990, offers more than 1,200 different tours – 90 per-

cent of which are suitable for “anyone who really wants more of a grassroots cultural experience while they are traveling,” Poon Tip says. The company has more than 800 employees but also provides jobs to contracted guides and field staff.

For those with a passion for experiencing different cultures, working as an adventure guide for Gap Adventures allows employees to lead small groups of travelers throughout the world. Tour leaders are paid on a daily basis, and all living expenses are included.

Poon Tip says he hires guides based on their previous travel experience as well as

leadership experience. Most of all, he says that prospective employees need to have a “curiosity for culture.”

“It is an extremely rewarding and fulfilling job because the trips change people’s lives,” he says. “You are changing people’s lives and fulfilling people’s dreams for a living.”

Fueling The Research Of Tomorrow

Another career choice anticipated to continue developing is fuel cell research. Fuel cell research, like other green jobs, is a good bet for students looking for job security, according to industry and career professionals.