

FOCUS: Higher education

Houston Colleges Expand Maritime Education to Meet Talent Demands



Rendering courtesy of San Jacinto College

“San Jacinto College is addressing the looming maritime worker shortage with its \$18 million Maritime and Technical Training Center, which is scheduled for completion in early 2015.”

By Michelle Leigh Smith, Special to Houston Business Journal

Zach Christians had plenty of scholarship choices when considering a university to attend. But having grown up around the water — he learned to swim at 18 months and spent his youth sailing at Houston Yacht Club — he figured there was only one choice if he wanted to eventually join the U.S. Navy.

After finishing high school last year, Christians, now 19, decided to enroll at Texas A&M University at Galveston to major in marine engineering technology.

“The school is my own little paradise,” said Christians, who points out that it’s even smaller than Bellaire High School, giving him better class sizes and more individualized attention from professors, rather than having to deal mainly with teaching assistants.

“I’m confident I’ll land a good maritime job either in the Navy or with a public company when I graduate,” he said.

Christians is not alone in narrowing his choice to TAMUG. With a total enrollment of 1,905 undergraduate and 109 graduate students, its maritime curriculum is being recognized as among the top five in the country, said Jeff Sjostrom, president of the Galveston Economic Development Partnership.

With the growth of offshore drilling helping to fuel economic growth along the Gulf Coast, and the expected impact from the widening of the Panama Canal in 2014 — not to mention the

workforce issues associated with the growing number of Baby Boomers who are retiring — more maritime-focused career opportunities are expected to open up, experts say.

Other educational institutions in the Houston region are recognizing that shift as well, with San Jacinto College and Galveston College setting up new programs geared toward those industries.

Research facility

Located on 130 acres on Pelican Island just north of Galveston, TAMUG's annual budget is now about \$55 million. It's home to a world-class research facility and a small nautical fleet in addition to the training vessel General Rudder — and has invested \$100 million in new construction over the past five years, including a \$54 million Ocean and Coastal Studies Building.

“In the last five years, they've experienced a growth rate of 25 percent,” Sjostrom said.

With more than 2,000 students known as Sea Aggies, TAMUG celebrates its 50th anniversary this year, as the Galveston campus carves out a niche as a premier university for ocean and coastal studies.

Some 150 faculty and 180 staff serve the university. Another 90 are employed by two contractors support the operations in dining services and facilities operations. The monthly payroll is about \$2 million while the university expends about \$2.5 million each month for supplies and services.

“The university has a far-reaching economic impact on businesses, industries, and enterprises of the state of Texas as well the nation's coastal areas,” Sjostrom said. “Its influence shines through graduates who populate research laboratories and field expeditions; marine and military vessels, and boardrooms and classrooms around the world.”

With more than half the maritime workforce populace facing retirement, there is a real concern of a looming worker shortage. According to a recent WorkBoat compensation survey, mariners age 25 and younger make up less than 1 percent of the maritime workforce, and only about 6 percent of workers are younger than 30, with 8 percent younger than 40.

To address this new reality, San Jacinto College is building an \$18 million state-of-the-art Maritime and Technical Training Center to open in the first quarter of 2015 on a 13-acre site. The college is currently conducting some classes in a rented facility for U.S. Coast Guard approved training, and the Standards of Training, Certification and Watchkeeping approved maritime programs.

Specialized training

San Jacinto College's maritime program is supported by an advisory committee of industry leaders with classroom and simulator instruction by some of the nation's most experienced professional mariners.

“We express our deepest gratitude to the citizens in our district for supporting San Jacinto College’s capital improvements, which enable us to provide an educated, highly skilled and well-trained workforce for our region,” said Laurel Williamson, San Jacinto College deputy chancellor and president. “ These facilities will provide our students with the most up-to-date training for many years to come.”

Retired U.S. Navy Rear Adm. Will Pickerance, who is a consultant for the facility, expects the new training center to open up huge employment opportunities, describing it as a “win-win for the college, those who desire to work in a great industry and, of course, our maritime industry, which needs highly trained and qualified individuals.”

The college, which has offered a full U.S. Coast Guard curriculum through its maritime technology associate degree program since fall 2011, has issued 1,800 USCG certificates, said college spokeswoman Amanda Booren.

The college’s associate’s degree of applied science in international business, maritime and logistics sets up students for careers in everything from import-export management, international marketing and sales, and tanker vessel management to cargo routing and distribution, port and facilities operations, air, truck, rail and ocean — multimodal — transportation and oil and gas/offshore logistics.

Graduates of this program can transfer to the maritime transportation management and security program at Houston’s Texas Southern University, or a bachelor of science degree in logistics and supply chain management at the University of Houston–College of Technology.

San Jacinto College also offers a ships and shipping course that allows students to earn an associate degree in business administration and take advantage of an articulation agreement with TAMUG to pursue a bachelor of science degree in maritime administration.

Subsea growth

Another identified energy-sector need is for more subsea engineers, due to the aging workforce.

UH now has the only subsea engineering program in the country, headed by founding director Matthew Franchek, a professor of mechanical engineering. A subsea specialization, one of the most difficult in the mechanical engineering regimen, trains offshore engineering professionals to design equipment, tools and infrastructure utilized in offshore petroleum production. “As long as the dollar profitability is there, you’ll have people going deeper and deeper (offshore),” Franchek said.

He points out that subsea engineering didn’t become a major draw for students until the mid-2000s. Certainly the Deepwater Horizon rig blowout in 2010 pointed out the need for the best technology available as the industry looked hard at safety issues in the wake of the disaster. There are now 70 students in the program.

“It didn’t become economically feasible until technology came in, which lowered the cost of getting out there and secondly, there was greater demand,” Francheck said. “A lot of things came together at once and all we had to do was listen to the oil and gas industry, as University of Houston always does.”

Franchek said he expects all subsea courses to be offered online by the spring of 2014.

Darcy Rieff, UH subsea program coordinator, said enrollment for the fall semester is at maximum capacity, and the school is already accepting applications for the spring semester, due by Oct. 25.

UH officials only expect the program to become more popular in the next few years.

“The benefit of the Panama Canal will be transport. We see most of the oil and gas we access being sold in Europe or Asia,” said Francheck. “All of the developing countries are consuming more oil and gas ..., We’re finding new reserves and using them in a smarter way. It’s an exciting time to be in the engineering business.”

MICHELLE LEIGH SMITH is a freelance writer.