River Valley Community College: Preparing Students for a STEM Future

BY MELANIE PLEMDA

The physical therapy assistant program at River Valley Community College.

Editor’s Note: This is the fourth installment of a series running every other month in the magazine focusing on each of the seven community colleges.

Look at projections for the fastest growing jobs in NH between the fourth quarter of 2012 and Q4 2014, and it’s clear workers who want to land jobs need to brush up on their math skills. From biomedical engineers and machinists to market research analysts and veterinary technicians, jobs require some understanding of higher math to do analysis, understand dosages, run machines and conduct experiments.

River Valley Community College in Claremont and Keene is one potential stop on a route to those careers, so the college puts a heavy emphasis on math literacy. That includes a new program in pre-engineering studies set to launch this year, but also extends into many current course offerings in Science, Technology, Engineering and Math (STEM) fields.

“Our cornerstone programming since we opened our doors in the late 60s was Allied Health, so we’ve been doing STEM for over 40 years,” says Valerie Mahar, vice president of student and community affairs.

The college currently has just fewer than 1,800 students, of which 496 are full time and 1,294 are part time. Most of the students are women (70 percent), with an average age of 27. The most popular majors are general studies, physical therapist assistant, occupational therapy assistant, business management, and computer technology. The fastest growing majors are business management, liberal arts (with a transfer to a four-year school), medical assistant, cybersecurity and health care IT.
River Valley is now finishing a $2.9 million renovation that includes new labs, offices and a coffee shop. The college also received a $400,000 National Science Foundation grant to fund programs in cybersecurity and health care IT, fields that are growing in response to beefed up health care privacy laws and a switch to digital records.

**An Equation for Success**

River Valley offers 35 career-oriented programs geared toward technical, business and health fields. Its newest, the pre-engineering program, is part of the community college system’s commitment to work with the NH Department of Education to increase the number of STEM graduates by 50 percent by 2020 and double that number by 2025.

“This focus on math is our foray into pre-engineering studies. It’s a way that we can attract students who are strong in math and higher skills,” Mahar says. One of the major reasons for establishing the pre-engineering, she says, is to attract more students into STEM and related fields to respond to student interest and business need.

However, the college offers a path into the program for students whose math skills are not up to par, says Susan Henderson, interim vice president of academic affairs. “We’re finding it difficult to get large numbers of students ready to get into that math concentration,” Henderson says. “Most of our students who are coming through the college are very weak in math, and so they do a lot of developmental work—sometimes one or two courses—before they can even enter the math sequence.”

Henderson says the college has a “very robust developmental math program” where students are placed after taking an assessment test to determine where they are in the subject. After taking those developmental courses, students can take advanced, math-heavy pre-engineering courses.

College President Alicia B. Harvey-Smith, who took the helm in July, says the new programs, along with the renovations, are creating a framework for future student success. “I think River Valley is positioning itself for a very bright and solid future,” she says.

Another new offering is a certificate program for polysonographer technologists, which prepares students to work in sleep labs. “There are a significant number of people now who have sleep apnea and need machines to get them through the night,” Henderson says. “This program is just in the beginning phases. We’ve had one graduating class so far,” which had three students.

The new cybersecurity program is earning praise from industry experts. “Cybersecurity is a huge thing in hospitals and doctor’s offices,” says River Valley Chief Business Affairs Officer
Robert Baron. “So this is helping students to enter that workforce, which is a very high paying field.”

**Building Success**

One of the biggest changes to the campus is the massive renovation project that affects more than 85 percent of the current Claremont facility. The renovation will allow the college to offer students the advanced technology training they will need in the workplace as well as knowledge they’ll need for a transfer to a four-year college.

The project includes new labs and technology for the occupational therapy assistant, physical therapist assistant and respiratory therapy programs, all of which Harvey-Smith says are the only courses of their kind in the state. The project will also include moving the Learning and Student Success Center so that it is adjacent to the Puksta Library. Harvey-Smith says this will allow students easier access to studying and tutoring resources.

The renovation will also create new faculty offices, several new smart classrooms, a new grant laboratory for scientific research and a new advanced machine tool lab, says Mahar. This grant-funded portion of the project will allow the college to purchase machines and 3D printers to give students practical experience, she says. The $1.1 million comes from River Valley’s share of a community college system federal training grant for advanced manufacturing.

A new multi-function café and learning space will replace the current Falcon Room dining area, and all hallways and common areas are being remodeled. The majority of funding was provided by the State of NH. Construction is expected to be complete by June.

**Partnerships Matter**

To fulfill its mission, the college has created more than 37 partnerships with area businesses, including Hypertherm in Hanover and Dartmouth-Hitchcock Medical Center in Lebanon.

Through its partnership with Hypertherm, which manufactures plasma-cutting systems, the company sends potential new hires to a nine-week training program at River Valley to learn machining programming through classroom and hands on training. Baron says a nearly $5 million grant from the U.S. Department of Labor allows students to be paid when receiving the training for the first three months to year of their employment (half of their pay comes from the grant and half paid by Hypertherm). Henderson says they’ve graduated more than 230 students since 2008, and all are employed.

The college also partnered with Dartmouth-Hitchcock Medical Center last month for an Academic Practice Partnership to provide practical application for those working on their Medical Assistant certificate. It has partnered with Dartmouth since the 1960s for its nursing program.

“They’re in the business of educating people to fulfill those roles in the future, and Dartmouth-Hitchcock is in the position of wanting to hire individuals who have been trained to fill those roles,” says Susan Reeves, a vice president at Dartmouth-Hitchcock, where she works in part on workforce development.
Though the program is too new at River Valley to predict its future, Reeves says similar programs, such as the nursing program conducted by DHMC and Colby-Sawyer College in New London, have been successful. That program, she says, has grown from just six to 10 students a decade ago to graduating classes of just fewer than 200. Further she says, “the majority” of those nursing graduates end up employed at the hospital following graduation.

“The community college system is absolutely producing critical segments of the health care future workforce,” Reeves says. “Roles like radiology technologist, sonographers, and programs like the certified medical assistant—the community colleges have associate degree nursing programs in all of them.”

And that need is only going to grow, Reeves says, noting there is a shortage of primary care physicians, which means there is more of a need for physician assistants and advanced nursing practitioners providing direct care. “I think there’s going to be a real reshaping of what that health care workforce looks like over the next 10 years,” she says.

**Marketing the Future**

To make sure students and businesses recognize the potential opportunities at River Valley, Harvey-Smith says the college is launching a massive strategic enrollment management and target marketing campaigns. Part of this effort, Harvey-Smith says, will be reaching out to veterans and “other special populations.” Details of those plans are still being finalized, but a pilot program is expected to launch this spring. The college will also launch a retention and enrollment campaign to encourage enrolled students to return and bring a friend. Students participating in this campaign will be entered to win a computer.

As for marketing, Mahar says the college will increase its $60,000 marketing budget by 10 percent this year to do more digital, Internet, television and radio promotions.

The goal, Mahar says, is to increase capacity 3 percent to 5 percent per year over the next five years by expanding offerings, offering classes in other Upper Valley locations, offering more online classes and additional schedules to include weekend classes. “It’s a really exciting time for us,” Mahar says. “We are seeing the economy pick up a little bit. ... So the sky’s the limit really.”