Software U
A hands-on school, backed by private equity, aims to profit from the national geek shortage | By Tim Doyle

CODY CUTRER TURNED DOWN full scholarships from the University of Utah and Brigham Young University to attend Neumont University, a fledgling for-profit school in an office park near his home just south of Salt Lake City.

Cutrer, a straight-A high school student who earned a near perfect score on the college boards, wasn't looking to slack off. To the contrary: He liked Neumont's breakneck pace of 8-to-5 year-round classes and its project-oriented, hands-on curriculum. The BYU and Utah courses, in his view, were too theoretical. "You graduate and don't know what you're doing. That doesn't cut it in the real world," opines Cutrer, now 20. And Neumont, despite its for-profit status, also offered him a free ride, waiving its $28,000 12-month tuition to attract a top prospect.

The U.S. has a big problem. The Bureau of Labor Statistics predicts it needs 135,000 new computer professionals each year. But between the dot-com crash and a misperception that all the good tech jobs are going overseas, fewer undergraduates have been majoring in computer science. U.S. universities are churning out only 49,000 grads a year. And many of those U.S. grads require additional training before they can function on the job.

"Usually the solution to a big problem is a good investment," observes Graham Doxey, Neumont's president and one of its three founders.

In 2001 Doxey, now 50, was searching for a good investment and a new career. He had spent 14 years working for Merrill Lynch and then Lehman Brothers, most recently as head of fixed-income sales in Asia. Doxey and his wife, both Mormons, wanted to return to Salt Lake City to raise their four children. Scott McKinley, a former JPMorgan Chase and Capgemini Asia executive, had settled in Salt Lake City with his wife and six children for the same reason. Meanwhile, Marlow Einlund, a Norwegian with 30 years as a software developer and executive, had moved to Salt Lake to be near his two daughters.

These three family men began meeting in the basement of Einlund's home to mull over early stage tech investments they might make. After listening to Einlund complain about the difficulty of finding and training new grads, they came up with the idea of running an engineering school geared to the needs of industry. The men met with dozens of prospective employers, students and teachers to gauge demand and refine their idea. They knew they were on the right track, Doxey recalls, when John Swainson, then IBM's head of software development and now chief executive of CA Inc., stopped them midpitch and said they had underestimated the need and held help any way he could.

Such enthusiasm was easy to come by. Financing was tougher. The three men scraped together enough from their own savings and friends and relatives to get Neumont up and running in 2004. (So far the founders, their friends and families have invested $4 million.) Eventually, after
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more than 20 pitches, Doxey sold his idea to Great Hill Partners, a Boston private equity firm with $1.5 billion under management. Great Hill has invested $20 million so far; a partner says the firm considers Neumont a long-term holding.

Physically and philosophically, there's no confusing Neumont with a traditional university. It is housed in a glass-and-steel reflective office building. Students live in nearby apartments—no campus quad, football games, frat houses or keg parties.

Doxey aims foremost to please employers—not students, not parents and certainly not the educational establishment. Produce what business needs, he figures, and graduates will win good jobs, which will in turn attract more paying students.

He's onto something. The school's first batch of 27 graduates this past spring spend only 30% of their time on theory and 70% learning the newest technology, mostly working in groups on projects. That's the way complex software is written today, in groups.

Not surprisingly, the 250 students who have enrolled so far are a pragmatic and career driven bunch. Some have quit full-time jobs for the chance to gain new, higher-paid skills. Scott Baldwin, 28, a straight-A student in Neumont's first graduating class, left a secure job developing Web sites to spend two years at the school. After earning his degree, he got five job offers and opted to move his wife and two daughters to Austin, Tex. for a position at IBM.

David DeWinter, 16, skipped three grades and picked Neumont after being rejected by Duke and Yale. (The Little Rock native heard about Neumont through the mailings it sends to students who indicate interest in computer science on their college board questionnaires.) DeWinter admits he misses some trappings of a traditional campus but says he's ready to make that sacrifice to keep up his accelerated pace.

That was the big selling point for Cutrer, too. Neumont, unlike traditional schools, allowed him to test out of introductory courses in his computer science major; during high school he'd earned three Microsoft certifications (indicating he was competent to write software). He expects to earn his bachelor's degree in just two years. "The biggest disadvantage is the social growth and [missing] the opportunity to meet thousands of people. It's just not the same," Cutrer acknowledges.

Social growth aside, how good an education are DeWinter, Cutrer and others getting? Neumont is clearly several rungs above such for-profit competitors as Strayer University and DeVry. Teachers at other for-profit schools are often lower-paid "adjuncts" who teach part-time. Neumont hires only full-time pros to teach computer science. In addition, it only takes students it deems able to do the work, rejecting a fifth of applicants. And it cuts prices to attract the academic cream. So far Neumont has pulled students from 44 states and 10 foreign countries.

But some in the educational establishment are still skeptical of Neumont's rush-through, hands-on approach. "What you learn in technology is gone in five years, so you need to learn the principles," says Pradeep Khosla, dean of the engineering school at Carnegie Mellon. Khosla says students need to know how semiconductor chips and operating systems are built, not merely how to program them.

But Halpin, the professor who came from Microsoft, finds Neumont's mix of theory and practice just right. "I have five degrees. I use some of the theory and 5% of the math," he says. "There are clearly areas where we could go deeper, but you've got to ask yourself: Will they use it?" He notes that he is now overseeing students who are creating software that can query multiple databases using logical algorithms, a fairly sophisticated project. President Doxey points to research from the nonprofit NTI Institute in Alexandria, Va.; it estimates that learning retention rates for those working in groups can range from 75% to 90% versus just 5% for students zoning out in lectures.

While they may be effective and sought-after entry-level employees, Neumont's students could find their graduate education options limited. The school is accredited by the Accrediting Council for Independent Colleges & Schools, which accredits other for-profit career schools such as ITT Tech. That means students could have a hard time transferring credits to traditional schools or winning acceptance in graduate programs.

Still, Doxey sees plenty of demand for good software engineers. With the Utah school almost profitable, Doxey is considering opening another school next year, on the East Coast. He aims, he says, to make Neumont the largest computer science graduate producer in the world. That's an ambitious goal. The University of Maryland cranks out 4,800 computer science grads a year and DeVry even more.

Eve Andersson, Neumont's academic head, predicts Neumont students will be better prepared when they land in corporate America than those produced by MIT. "Our guys may be their bosses," says Doxey.

Neumont aims to please employers—not the educational establishment.

all had jobs waiting, with an average starting salary of $61,000—some 20% more than the average computer science grad and 50% more than DeVry University graduates' starting pay. After a year Neumont's graduates should be able to command $70,000 to $90,000, predicts Joshua Steimle, chief executive of Salt Lake City Web design firm MWI, which hired two grads. "Neumont students can jump right into projects," says Steimle. "It would be the first place I'd go to hire more developers."

The connection to industry goes beyond job placements. Most of Neumont's profs were recruited from corporations. Neumont's first hire, Terence Halpin, a 30-year software industry veteran, came from Microsoft. IBM engineers sit on the school's advisory board, influence curriculum and work with students on real-world projects. The speakers at the first graduation: Utah Governor Jon Huntsman Jr. and Nicholas Donofrio, an IBM executive vice president for technology.

At elite liberal arts colleges, the profs disdain practical skills and pontificate about theoretical topics suited to their academic journals. Not here. At Neumont students