

**A  
DEGREE  
AND  
WORK  
SKILLS, TOO**

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## ■ Study the Schools

a sharper focus on job prep as part of a four-year education.

"There is lots of concern out there about the rising costs of college and the value of college and whether students will be able to get jobs after college to pay off debt," says William Kirwan, chancellor of Maryland's university system. "Universities are trying to be more sensitive to this." The result: new career-oriented majors; an emphasis on "soft" skills sought by employers such as communication, collaboration and critical thinking; beefed-up experiential learning and internship programs; increased research opportunities and capstone requirements; and enhanced career counseling services.

Still, it's up to students to put themselves on track to land that first job. With NACE projecting hiring levels for the class of 2013 to remain relatively flat, even a major in a hot science or technology field may be no guarantee. According to Georgetown research, for example, the unemployment rate for recent information systems grads is a startling 14.7 percent, compared to the national average of 7.4 percent. For computer science grads, the rate is lately 8.7 percent; for mechanical engineers, it's 8.1 percent, the same as it is for recent liberal arts graduates. What strategic steps can you take?

### 1. Choose your course of study carefully.

Understandably, many parents want their college-bound kids majoring in engineering, the life sciences, computer science, accounting and business, says St. Paul, Minn., college counselor Jason Lum. But even if an art history or philosophy degree is not in your future, don't dismiss the liberal arts, he cautions. Employers agree. According to a recent survey by the Association of American Colleges and Universities, 74 percent of employers say they would recommend a liberal arts education as preparation for success in a 21st century global economy.

In fact, nine of 10 surveyed employers say the ability to "think critically, communicate clearly and solve complex problems" is more important than one's undergraduate major. Other key attributes employers seek: an ability to apply knowledge in real-world settings, knowledge of global issues, intercul-

tural skills, creativity and innovation.

"It is extremely important" that job candidates master the general skills strengthened by liberal arts courses, the "communication skills, the ability to analyze and multitask, and the ability to work in teams," says Dan Black, Americas director of recruiting at tax services giant EY (formerly Ernst & Young). Black, who last fiscal year hired 3,400 mostly business, accounting and information technology grads for full-time positions in the U.S. and 2,600 as interns, looks particularly for people who can show an aptitude for working in teams and solving complex problems. "A lot of this is grounded in a good liberal arts education," he says.

One way to get this type of cred is

through a minor. "You'd be amazed to see how many students have minors" these days, notes Kirwan. Unexpected pairings - business students minoring in English literature or biology, science majors choosing philosophy or religion - can help undergrads buff both their technical and soft skills. It works the other way too. Music or humanities majors can make themselves more interesting by minoring in engineering, the life sciences or pre-law. "It's an informal process, but it's powerful," says Carnevale of minors.

Another way is by making the most of distribution requirements. Taking literature classes "made me think outside the box," says Kathryn Abruzzo of Westfield, N.J., who graduated this spring from Virginia Tech with a major



Northeastern students typically complete two or three paid co-ops.



the nation's first undergraduate cybersecurity honors program, launching this fall. The "vast majority" of need is at the bachelor's level, says Kirwan. The new Advanced Cybersecurity Experience for Students program, which will house students in a "live-and-learn" themed residence hall, intends to not only turn out crackerjack technical professionals, but also to steep them more broadly in the business, public policy, legal and societal aspects of cybersecurity, a specific industry need.

Other examples of hot programs that cultivate both technical and soft skills while responding to workforce needs: public health at the University of South Florida, Brown and George Washington University in D.C.; environmental sciences at the University of Wisconsin-Madison, Cornell University in Ithaca, N.Y., and Oregon State; and robotics at the Franklin W. Olin School of Engineering outside Boston and Carnegie Mellon in Pittsburgh.

## 2. Look for real-world work opportunities.

Internships or cooperative education programs (which typically alternate periods of professional experience, often salaried, with class time in a five-year curriculum) can give new grads a leg up in the job search. Among class of 2013 graduates, those who boasted an internship were more likely to land a job, according to NACE. Sixty-three percent of paid interns received at least one job offer, while 37 percent of unpaid interns did. That compares to 35 percent of graduates with no internship experience who got a job offer. Overall, 63 percent of graduating seniors in 2013 had an internship, co-op assignment or both, the highest proportion in the seven years that NACE has been keeping track.

"It's a big reason I went to Drake," says Katie Minnick, a recent grad in graphic design and magazine journalism from Liberty, Mo. She chose Drake University in Des Moines, Iowa, over her other options, including the University of Missouri's famed J-school, largely for the shot at interning with magazine publisher Meredith Corp. through the school's robust internship offerings. Minnick, 22, collaborated with Meredith editors her junior year, working on spreads and designs for

in mechanical engineering. The university requires all undergrads to choose about one-third of their credits from the Curriculum of Liberal Education. Abruzzo, who took courses in technical writing, science fiction & fantasy and detective fiction, started working at Honeywell's aerospace division in Phoenix in July.

Meanwhile, Brown University in Rhode Island, George Mason University in Virginia and a growing number of schools are implementing "writing across the curriculum" and "writing in the disciplines" to develop students' ability to synthesize information in any subject, and convey it convincingly in the appropriate format and language - recognizing, for example,

that a proposal intended to persuade a grant-making foundation will need to be handled differently than a scientific study or corporate annual report. The University of Southern California and Princeton do a "great job," notes Lum, with writing programs that help engineering students hone their communications skills.

Responding to employers' pleas for specific skill sets, a number of schools are bolstering certain programs or crafting entirely new majors (story, Page 25). After a 2011 STEM task force in Maryland highlighted a serious shortage of cybersecurity pros in the state, for example, the University of Maryland, in partnership with Northrop Grumman Corp., designed



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various print and web products. That led to a paid design apprentice position at Meredith senior year, which she believes was key to her success at landing a job, starting after graduation this past June, as an interactive designer at health care information technology giant Cerner Corp. in Kansas City. "I know that prior work experience gave me an upper hand," says Minnick, "just in the fact that I had real-world experience and prior interview experience."

Many colleges now facilitate internships. American University's School of Communication in Washington, D.C., sponsors internships with media organizations in the nation's capital, for example; Eastern Connecticut State University's Liberal Arts Work! program sends students to intern with insurer Cigna; and Miami Dade College has students interning with Florida Power & Light, Baptist Health of South Florida and other local employers. "It was the hardest thing I've ever done, and it was definitely the best learning experience I've ever had," says Shaun Holt of Cranston, R.I., a 2013 communications and culture graduate of Clark University in Massachusetts.

Holt interned last summer working with video in the sustainability department of the data solutions company EMC Corp., through Clark's liberal education and effective practice (LEEP) program. LEEP puts students to work with faculty, graduate students and outside organizations; projects range from consulting with local entrepreneurs to helping analyze the results of a psychology study and collecting data on climate change. "I learned how to successfully communicate within a corporate environment," says Holt, who now is pursuing his master's through Clark's fifth-year-free bachelor's/master's program.

Recognizing the power of paid internships, the University of Richmond in Virginia has just launched a summer fellowships program that takes the unusual step of paying 300 students either to intern or to conduct undergraduate research in fields of interest. "Internships are the new interview," says Katybeth Lee, manager of Richmond's internship program, noting that the \$2,400 to \$4,000 university-provided stipend will allow many students to avoid having to forgo an otherwise unpaid opportunity

to instead wait tables. "I probably would have been working as a camp counselor in my hometown," says Katy Norfleet, a junior studying public health at Richmond. Instead, the aspiring physician's assistant from Wilton, Conn., interned at New York's Memorial Sloan-Kettering Cancer Center this summer getting paid \$10 per hour by Richmond to work with children with cancer and their families. Norfleet says the internship has "solidified" her desire to work in health care, specifically helping children with cancer.

Interest in co-op education has jumped since the job market slumped; co-op powerhouse Northeastern University in Boston, for example, received 47,359 applications for 2,800 freshmen seats this fall, 74 percent more than in 2006. "Northeastern was a back-up to a back-up school at one time," says counselor Lum. "That's not the case anymore." The school is indeed attract-

ing a higher caliber of student, says Stephen Director, Northeastern's provost and senior vice president for academic affairs. SAT scores of incoming freshman have risen from 1230 in 2006 to 1390 in 2013.

One such student is Taylor Hogan, a third-year student from Hubbardston, Mass., who turned down offers from Columbia University, Babson College and five other schools to pursue business administration at Northeastern on a full ride. "Northeastern's emphasis on experiential learning and the co-op was the big draw," says Hogan, who left in July for his first six-month co-op with Heart Capital, a social investment firm in Cape Town, South Africa. Heart assigned him to consult for FoodPods, one of the businesses in the firm's portfolio that provides the poor with materials and the know-how to start and manage micro agri-businesses. The co-op gives Hogan on-the-ground experience in urban agriculture and social entrepreneurship, his two keenest interests.

Northeastern students typically complete two or three different paid co-op experiences while earning their degrees in four or five years, depending on their course of study. More than half of NU students get job offers from a co-op employer. Other colleges with robust co-op programs include Philadelphia's Drexel University, Cornell, Georgia Tech, Massachusetts Institute of Technology, and George Washington University.

### 3. Explore widely and delve deep.

Other résumé attention-getters include in-depth theses or projects, undergraduate research with a faculty member, and study abroad (which some experts say is increasingly a key to landing a job in a global economy). At Drake, all journalism majors are required to complete a senior capstone to graduate, a project designed to be the final crowning achievement of their course of study. Minnick and 13 other women created a digital men's magazine called "Man Up" as their capstone. As the team's digital director, Minnick had to figure out what platforms to use (the magazine is available on all Apple products and Android phones) and how to put the content on the platforms, and then ensure that all the technology worked.

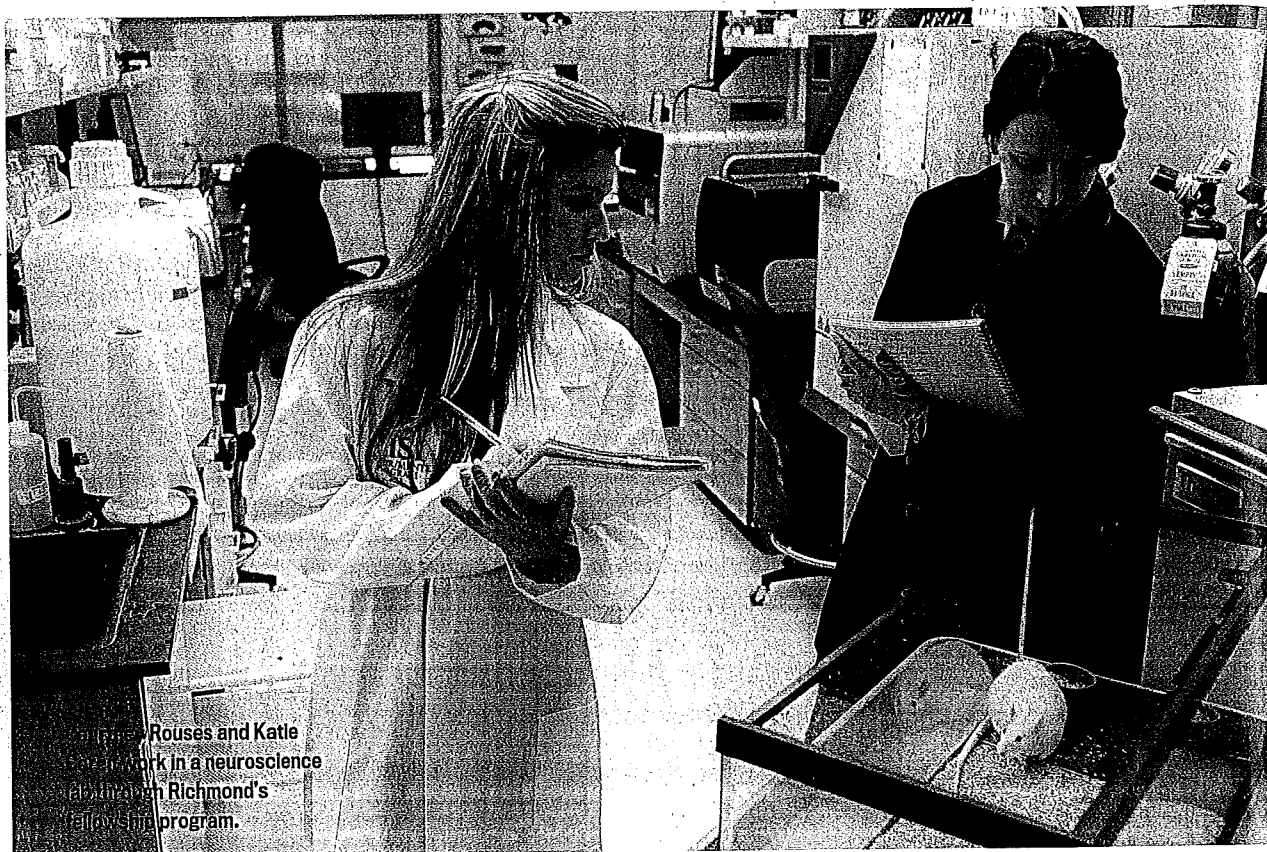
## Internships

When U.S. News asked college officials in the spring to nominate up to 10 schools with terrific internship programs, the following institutions got the most mentions. They require or encourage students to apply what they're learning in the classroom to work in the real world through closely supervised internships or practicums, or through cooperative education, in which one period of study typically alternates with one of work.

Berea College (KY)  
Cornell University (NY)  
Drexel University (PA)  
Elon University (NC)  
George Washington University (DC)  
Georgia Institute of Technology\*  
Massachusetts Inst. of Technology  
Northeastern University (MA)  
Purdue Univ.-West Lafayette (IN)\*  
Rensselaer Polytechnic Inst. (NY)  
Rochester Inst. of Technology (NY)  
University of Cincinnati\*  
Wagner College (NY)

\*Public

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Rouses and Katie work in a neuroscience laboratory through Richmond's fellowship program.

Worcester Polytechnic Institute in Worcester, Mass., requires two projects that are supposed to solve real problems or address real needs. For example, 2013 civil engineering graduate Marco Villar of Chula Vista, Calif., teamed up with classmates to develop cheap, sustainable paper insulation for housing in impoverished communities in Namibia that could also create jobs.

Finally, in this day and age, just as technical majors may want to take writing or public speaking courses, humanities and other non-techie students should consider adding some computer science expertise to their list of credentials. "A computer today is like the ax of the Stone Age and is key to efficient survival in today's world," argues Samir Khuller, chair of the University

of Maryland's computer science department. "Students in any field will have a competitive advantage if they can understand the algorithms available to help them do their own work."

The bottom line, says Carnevale, is that getting equipped as fully as possible for the workplace takes thought and planning. And it is up to forward-thinking students themselves. ●

## Service Learning

Many schools now make practical, real-world volunteer work a course requirement; what's learned in the field bolsters what happens in class, and vice versa. When U.S. News recently surveyed college officials for their nominations of colleges and universities with outstanding service learning programs, these schools got the most votes.

Augsburg College (MN)  
Berea College (KY)  
Brown University (RI)  
College of the Ozarks (MO)  
Duke University (NC)  
Elon University (NC)  
Georgetown University (DC)  
Indiana U.-Purdue U.-Indianapolis\*  
James Madison University (VA)\*

John Carroll University (OH)  
Loyola University Chicago  
Loyola University Maryland  
Loyola University New Orleans  
Michigan State University\*  
Northeastern University (MA)  
Portland State University (OR)\*  
Seattle University  
Stanford University (CA)

Tufts University (MA)  
Tulane University (LA)  
University of Michigan-Ann Arbor\*  
U. of North Carolina-Chapel Hill\*  
University of Pennsylvania  
Wagner College (NY)  
Warren Wilson College (NC)

\*Public