Low-Profile Lab Links Students with High-Impact Careers

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ASHLEE CUMMINGS, A SENIOR ELECTRICAL

ENGINEER MAJOR, HAS ALREADY BEEN HIRED AND IS
WORKING FOR CISCO AT THE INTEROPERABILITY LAB.

When it came to testing the job market this spring Ashlee Cummings '12 hooked a prize-winner without really having to set her bait.

"I filled out the application and a week later I had an offer sitting in my lap," says Cummings. "I never thought it would happen that easily."

Cummings was hired in March by Cisco Systems, the high tech networking giant, for a position called IPv6 Test Engineer. That job, located in Durham, North Carolina, is filled normally by a candidate with industry experience. But over the last two years Cummings has gotten that experience, cutting her teeth as a test engineer at UNH's InterOperability Lab (IOL).

The IOL is a professional environment that provides Cisco, Juniper, Hewlett Packard, and other technology companies a neutral site where their engineers can meet. There they work together to ensure that their computers and routers and other devices will work bug-free in the marketplace. This is an essential part of developing hardware and software, and the IOL is one of the premier independent testing labs in the industry.

Known all over the world yet still something of a secret in Durham, the IOL employs 80 UNH undergraduates on the third floor of an office building just off campus near Lee. The facility is a labyrinth of wires and screens and computer boards, a place where key passes are required for entrance to certain rooms. A shuttle takes students to and from campus every 30 minutes.

Chris Hutchins '12 is a computer science major who has worked at the IOL since his freshman year. When his girlfriend Kae Dube '12 needed a job, he helped her find one at the IOL, too. Hutchins and Dube are now engaged and though they've always worked for separate groups, their collective experience of the IOL is setting them up well for their future together.

Testing hardware and software is essentially a matter of finding the problems – the bugs – that hold up communication between devices. All new employees take a three-week class in computer networking, and there is a lot of informal mentoring going on in the lab. But in the spirit of the lab, and of becoming better problem solvers, students are encouraged to figure things out on their own.

STUDENTS CHRIS HUTCHINS AND KAE DUBE PUT
THEIR HEADS TOGETHER AS TWO OF 80 STUDENTS
EMPLOYED AT THE INTEROPERABILITY LAB. THEY
ARE ENGAGED TO BE MARRIED.

In his four years at the IOL, Hutchins has honed this skill, and he has learned volumes about computer networking. He has learned the complicated operating system Linux, and the programming language Pearl Scripting. In an effort to build his skill set, he has jumped between groups in search of new learning experiences. The fulltime staff encourages students to do this.

"If you're interested in something tell your manager," says Hutchins. "A lot of times you'll be able to transfer part or all of your time over to another group. The lab wants to make sure you're prepared for [your first job after graduation], with whatever you feel you need to know." Internet Protocol version 6, or IPv6, is something that Hutchins and his coworkers have heard a lot about. IPv6 has been developed as a successor to IPv4, which is the current address protocol used to direct almost all Internet traffic. IPv6 has an almost unlimited address space, while IPv4 is running out of addresses. The IOL is one of the largest labs accredited for IPv6 compliance testing, and its schedule is full through August.

Cummings says she'd rather have a job at the IOL than an internship in the industry. In an internship, she says, a student interacts with just one company. But at the IOL students can be interact with several companies.

And that exposure, says Cummings, teaches you "to be professional in the industry. You learn how to talk to people…You learn how to market yourself as a good employee.

If you're talking to a vendor you want to be professional. They could be your coworker in the future – or your employer."

Dube, a chemistry major who never planned to go to graduate school, says her time at the lab has caused her rethink that. Soon she will begin a Master's program in Computer Science at UNH. She plans to do her thesis work on some aspect of the IOL, in a way that would benefit the IOL. The IOL might even pay her tuition, she says.

Meanwhile, her fiancé Hutchins has accepted a position in IT security at Liberty Mutual. When he interviewed for the job he knew it required experience. He also knew he had plenty of that.

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