

University of Maine

2012

Engineering

Discovering
sustainable
bioeconomy
solutions



Established baseline

The University of Maine's surveying engineering technology is the only four-year program in New England. Classes in land surveying have been offered throughout UMaine's history. A two-year degree program started in the 1960s.

Alumna Lori-Ann Stubbs, a 2006 SET graduate, has been employed by SGC Engineering since 2007.

UMaine continues its leadership role in SET education

AS A MEMBER of the Surveying Engineering Technology Program faculty in the University of Maine School of Engineering Technology, Carlton Brown teaches in one of the smaller programs on campus. But survey engineering at UMaine — the only four-year program in New England — has an important history and an essential mission for the future, and Brown says it is positioned for growth.

“There will always be a need for professionals who know the art, science and technology of measuring the shape of portions of the Earth's surface, and of locating things precisely on the Earth's surface,” he says.

New technologies — such as geographic information systems (GIS); global positioning systems (GPS); and light detection and ranging (LiDAR) — have changed the way land surveyors practice, he says, but these tools demand an ever-higher level of expertise in a field long defined by the need for precision. Although digital and satellite capabilities have usurped some of the traditional tasks of land surveyors, Brown says survey engineers will always be in high demand.

UMaine has offered classes in land surveying throughout its history. A two-year degree program started in the 1960s.

But in the mid-1970s, professional

surveyors across New England were worried that the field wasn't attracting or adequately preparing new young surveyors to enter the field. Standards for entry-level jobs and professional licensure varied from state to state, making it harder for qualified surveyors to practice across state lines.

In 1973, Boston surveyor Fritz Petersohn, then chair of the New England Section of the American Congress on Surveying and Mapping, proposed establishing a professional land surveying program at one regional university that would serve all six New England states. The program would develop a curriculum reflecting a common professional standard for all the states and would prepare students at several levels, including the Ph.D. needed for careers in research and academics. Students from New England would pay a reduced tuition to attend.

After a review of more than two dozen colleges and universities in the region, a request for proposals was issued. With support from the New England Land Grant Deans of Engineering organization, UMaine was selected to host the land survey program.

To this day, UMaine's Surveying Engineering Technology Program still offers the only four-year survey engineering degree in New England, according to Brown. Thanks to an



Point of beginning

TARA HARTSON of Hancock, Maine, is a 2007 graduate of the Surveying Engineering Technology Program and a Maine-licensed professional land surveyor. Since graduating, she has been employed by Herrick & Salsbury Land Surveyors in Ellsworth, Maine, where she interned the summer between her junior and senior years.

Hartson was eager to pursue a career path that would allow her to stay in Maine, earn a good salary, and work outdoors much of the time. For a while, she worked for the National Park Service on the trail crews and considered studying landscape design. Then her sister suggested surveying.

Since graduating, Hartson has worked on projects ranging from subdivisions and residential layouts to airport runways and power lines. She performs legal research and presents projects to municipal planning boards. She estimates she spends at least half her time outside, which is where she most wants to be.

ongoing agreement with the New England Board of Higher Education, students from other New England states pay approximately half the out-of-state tuition rate.

The program is ABET-accredited by the Engineering Technology Accreditation Commission for Surveying and Geomatics Engineering Technology.

Today, about 50 students are enrolled in the survey engineering program and graduates have no trouble finding jobs in-line with their personal and professional goals, Brown says. The field appeals to those who enjoy working outside and with a degree of autonomy.

Older, nontraditional students typically are well represented in survey

engineering classes, as are military veterans and a growing number of women.

While many graduates of UMaine's Surveying Engineering Technology program find jobs in Maine, others are working farther afield. For instance, one 2009 graduate is a project manager at Portsmouth Naval Shipyard, managing the construction of dry docks and other facilities.

A 2008 graduate worked three years for the city of Denver, Colo., as a senior survey technician before accepting his present position with the Arizona Public Service Company. And a 2011 graduate is pinpointing new underwater drill sites for the petroleum industry in the Gulf of Mexico. ■