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Civil Engineering Technology and Land Surveying

Civil Engineering Technology

The Civil Engineering Technology Program (CET) began in the fall of 1999 at the Boone Campus. The Iowa Department of Transportation, as well as other members of the civil engineering industry, were anticipating a large number of retirements over the next 10-20 years. The Eisenhower Interstate Highway System (41,000 miles of interstate roadways) was designed and constructed in the late 1950's and early 1960's, employing thousands of engineering technicians. These technicians were quickly approaching retirement age and new technicians would be needed to replace them.

The CET program educates students to help design, construct and maintain our civil engineering infrastructure: bridges, roads, dams, culverts, airports and more. The students, who will become the eyes and the ears for the engineer, get trained in surveying, inspection, highway design and materials testing. During the summer between their first and second year, they work in a paid internship to further enhance their education and obtain real-life skills.

The CET program has graduated 150 students (2001 – spring 2015), with a 95 percent placement rate. Graduates work at city engineering offices, county engineering offices, state highway departments, private consulting firms, private testing labs, private surveying firms, highway contractors and more. Starting salaries range from \$31,000 - \$41,000 (2011 placement data).

Technical Training and Certification Program (TTCP)

As a result of the successful beginnings of the CET program, the Iowa Department of Transportation (DOT) looked again at DMACC in 2000 to establish a partnership to teach and administer portions of the Iowa DOT Technical Training and Certification Program (TTCP). The TTCP certifies technicians who are sampling or testing highway materials, as well as the inspectors and observers who are watching the work be completed. Certifications are required for aggregate, Portland cement concrete (PCC), hot mix asphalt (HMA) and soils. There are multiple levels of certifications that the TTCP offers in each subject matter (PCC I, PCC II, and PCC III for example). Certifications last for 5 years, at which point a technician needs to come back and take a re-certification class in order to stay current.

The TTCP certifies or re-certifies 2500+ technicians each year, holding over 200 individual classes that range from ½ day to 5 days in length. The majority of these classes are taught at DMACC Boone campus, with the rest being taught in Iowa DOT District offices and labs. DMACC employs over 35 adjuncts and 2 full-time staff to teach and administer the program.

Each year the program gets larger, adding new certifications and/or new informational classes. In 2015 the DMACC Boone Campus is doing a 6500 square foot expansion to the CET wing to accommodate this continued growth.

Land Surveying

In 2001, the Society of Land Surveyors of Iowa (SLSI) approached DMACC about offering this program to train the next generation of Professional Land Surveyors. The state had approximately 250 Professional Land Surveyors at the time, many of whom were approaching retirement age.

Land Surveying is a very specialized discipline, with professional licensure required. In order to become licensed, individuals must work under a professional land surveyor for ten years and take two licensing exams during that time. Because of the specialization of the training, DMACC knew it would be a small group of students, and, therefore, tied it to the Civil Engineering Technology program with similar coursework taken over the two-year degree period.

The program ran from 2001 until 2011, with nine graduating classes. During that period of time, 53 students graduated with a degree in Land Surveying. The placement rate was nearly 100% with good starting salaries.

In the fall of 2012 the first graduates of the program were eligible to sit for the Iowa Professional Licensing exam. At least six have already received licensure, with many more slated for the exams in the upcoming years.

Although the Boone Campus no longer offers the Land Surveying degree, it does continue to offer continuing education courses for the land surveying industry. Many graduates return to campus for these continuing education opportunities. DMACC is proud to have played a part in educating new professional land surveyors and welcomes the opportunity to re-start this program if and when the need arises.

Steve Nelson was the program chair for the above programs from 1999 – 2000. Renee White has been the program chair 2001 – present.

Created August 2015 in celebration of DMACC's 50th Anniversary.