Drawing on Our Experience

CADD department adds new program

Before a bridge, a road or a subdivision can be built, someone has to take the engineer’s plans and turn them into a usable blueprint. That’s the role of a Civil Computer Aided Design Drafting (CADD) technician.

In response to the growing need for this vital link, Sullivan College of Technology and Design (SCTD) has started a Civil CADD program. The school welcomed its first class this spring. Randy George, CADD department chairperson, is excited about offering the new program because students will have so many different opportunities to learn and practice new skills.

Civil CADD focuses on the design and development of human infrastructure such as roads, subdivisions, bridges, dams and more. Civil CADD technicians frequently survey areas for development and create digital maps of the area involved, both before and after development.

“Students will actually go out to a site and conduct field surveys and bring raw data back to the classroom,” said George. “They will use the data to create a variety of drawing types. Students will learn how to use Electronic Measuring Devices (EMDs) and Geographic Positioning System (GPS) equipment. In addition to collecting field data, students will also research property documents using Internet resources and conduct Global Information System (GIS) surveys.”

Great benefits for other programs, too

Creating the new Civil CADD program had some positive effects on the Mechanical and Architectural CADD programs, as well. Based on research in the fields and the recommendations of SCTD’s CADD Advisory Board members, the amount of board drafting required in all CADD programs and the drafting certificate has been reduced from 16 credit hours of board drafting to 9 credit hours. This allows more time for program-specific coursework and work with appropriate software.

Two new courses, Structural Design and BIM (Building Information Modeling), both capstone courses in which students from all three programs will work together on large projects requiring architectural, mechanical and civil planning and design, have also been added.

BIM allows students to create an entire building in 3D, make changes across drawings at one time and check for interferences such as a Heating, Ventilation, Air-Conditioning (HVAC) duct misplaced so it goes “through” a beam. Randy George says the field has changed since the old board drafting days where a drawing alteration had to be made by hand across multiple drawings. The changes in the CADD programs will provide students with the skills they need to be marketable with today’s employers. Additional changes include more problem solving and an overview of “green” design as the concept applies to each CADD field.

Certifications will benefit SCTD’s CADD graduates

Now students in these programs will sit for American Design Drafting Association (ADDA) certification in their field(s) of study. Certifications will enhance our graduates’ resumes, and with the added course content, will make SCTD’s CADD graduates more marketable.

Robert “Mitch” Mitchell, a faculty member and an ADDA certified Mechanical Drafter, says of the changes, “Students will see firsthand all stages of the design process, from the conceptual design stage to the prototyping stage. The latest technology in 3D modeling will now be used throughout all class projects.”

Graduates from Sullivan College of Technology and Design’s (SCTD) Civil Computer Aided Design Drafting program can find career opportunities as technicians working with engineers to create subdivision plans, highway layouts, and structural drawings for dams, bridges, etc.

SCTD is their perfect choice for Architectural and Mechanical CADD

Jeremy Curtis, left, admires classmate Ken Watkins’ design. Both are Mechanical CADD students. Ken is a returning alumnus; he earned his degree in Architectural CADD in 1991.

“This is the best school around for my field. Everyone is friendly; it’s just an all around good environment. I love building different objects and I enjoy playing on a computer, so I want to make it a career. I love any AutoCAD class. I learn new information every day which will help me be that much better at my future career.”

JEREMY CURTIS

Paul O’Brien is pursuing his degree in Architectural CADD.

“SCTD can help me become involved with the design community; plus, all my courses correlate with my field of study.”

PAUL O’BRIEN