

## **Landscape Drafting**

### **Integrating workforce education with local design offices**

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#### **Overview of Instructional Opportunity**

The Architecture & Engineering Computer Aided Design department (A&E CAD) currently offers many options for degrees and certificates and has a good track record of graduates finding jobs or transferring to university in their chosen industry. The majority of the department is focused on computer aided drafting in various programs related to the building industry.

The degree programs offered are:

- A.S. Architecture
- A.A.S. Architectural CAD
- A.A.S. Civil CAD
- A.A.S. Electronic CAD
- A.A.S. Mechanical CAD

The certificate programs offered are:

- Computer Aided Design Foundation Level 1
- Architectural CAD/Building Information Modeling (BIM) Specialization Level 1
- Civil CAD Specialization Level 1
- Integrated Circuit Layout & Design Specialization Level 1
- Mechanical CAD/CAM Level 1

The foundation of each of these programs is a course, DFTG 1405 Technical Drawing, which utilizes AutoCAD software. AutoCAD is mainly a 2-dimensional drafting program widely used in the building design industry. The only exception to this is the A.S. Architecture degree which prepares students to transfer to a university program in architectural design and does not require DFTG 1405. Though there are a wide range of drafting software programs, the department believes that a common foundation in AutoCAD is the best choice as it is the most widely used across the building, design and manufacturing industries accounting for between 35%-40% of the market. This course introduces students to computer aided drafting concepts

and allows students to more easily transfer their skills to other software programs used in these industries. This most often occurs in on the job training as was affirmed in my research.

It is thought that a course in AutoCAD for landscape design would be a natural complement to the disciplines already offered by the A&E CAD department. My goal in developing this course is to have a new course that augments our offerings, create a pathway for students to join Austin's robust design industry and create connections with local firms that would benefit the school's students in years to come. This course will initially be offered as an elective, with the hope that it be a required course for the Civil CAD program in future. The viability of this type of course depends on understanding Austin's landscape design industry and building relationships with companies to support students' future careers.

### **Program Research and Development**

In order to guide the development of this new course, I conducted interviews and conversations with industry leaders both within Austin Community College and professionals in the Landscape Architecture community of Austin.

After meeting with department leaders and faculty, it was determined that the course would be most effective following a similar methodology to existing AutoCAD courses. DFTG 2427 Landscape Drafting is already adopted in the WECM course inventory and would be the structure for the course description, learning objectives and learning outcomes. This course will have a short drafting project to begin the semester introducing the major concepts, components, skills and terms in landscape design, then it would move into the drafting of a larger landscape design project that would consume the remainder of the semester. These larger modules would be broken down into smaller milestone assignments for review and assessment. The large project selected is the St. John's Encampment Commons. This site was chosen with the input of faculty and staff due to its size, level of complexity and its location on the ACC Highland Campus where our department is housed. Choosing this project allows the students to visit the park and make connections with the concepts, materials and spatial relationships they are drawing in class. Using this site also creates opportunities for future collaboration with other programs at ACC including Geographic Information Systems and Geospatial Engineering, allowing students to better understand how their work connects in the planning and design of the built environment.

Industry professionals also revealed much information that was helpful in developing the course. 5 firms in particular were very helpful in their feedback of the planned course. It was confirmed that traditional design firms (single discipline landscape architecture and

architecture firms) are still unlikely to hire someone who does not have a professional or lesser degree from a university program in landscape architecture or architecture. When questioned whether they would hire a technical drafter for the rote tasks that are required in a design firm, many interviewed said that they would like to explore the idea. The professionals want to deepen their relationship with the A&E CAD program for future interns to test this avenue. We in the department have nurtured many ways to augment these connections including invitations to our career fair, having outside professionals review student work and obtain feedback on curriculum in order that our courses stay current with industry practices.

Another important finding was the wide array of drafting software used in Austin's landscape design industry, with most firms using some combination of AutoCAD, Revit, Vectorworks, and Land FX. However, the consensus by most practitioners is that it is important to learn any CAD program to find employment in the industry. Knowing the concepts and tools in one CAD program allows one to more easily transition to others and makes one more enticing to a firm looking to fill an entry level position. Most professionals stated that they learned AutoCAD first which allowed them to easily learn other drafting software on the job. Software choices vary by firm and region in the US, but having a foundation in AutoCAD is still recommended.

The professionals also agreed that the most important skill they need in new hires from any college CAD program is how to follow industry conventions and have precise drafting skills that follow the CAD standards. Design drawings are communication and having a set of drawings that all industry participants can read and interpret is the most important issue. This feedback from the employers confirmed our teaching methodology for this and other CAD courses in the department. We use and teach the National CAD Standards as the basis for our drawing conventions.

These interviews were productive on many levels, but most important for the connections that were made and relationships that were initiated. I was able to learn about how the industry is practiced in Austin and the firms learned about the work being done at ACC to support them. In speaking with one firm, we realized that they had designed the St. John's Encampment Commons park that we intend to use in the course, were able to obtain the original AutoCAD files for the project, and jump start our course design. I hope to continue our relationship with these and other firms throughout the development and teaching of this course. I intend to have guest lecturers, site tours and other opportunities for the students to learn about all aspects of landscape design should they want to pursue this profession.

### **Course Development**

The development of the course is ongoing as I integrate the information gathered in the interviews into the course design. After having regular meetings with the chair and other

educators in our department, it has been determined that the course will be piloted in fall semester of 2026. A draft of the curriculum, schedule, syllabus and evaluation methods are being refined along with the main project and will be reviewed by the department chair and additional staff in early summer 2026. As some of our CAD courses are partially or entirely taught online I have also been assigned an instructional designer in the Distance Learning group and am awaiting a meeting as I have not taught an online course previously. It is anticipated that this course will be a hybrid course as there will be site visits and skills that are best taught in person. There is much anticipation for the debut of this class and we expect strong enrollment.

### **Conclusion**

This effort has been enlightening on many fronts and I hope to continue to work with the amazing educational resources at ACC as well as the professional connections established in the course of this research. As I am an Architect by profession and training and not an educator, this time to learn about the various methodologies and resources in the school as well as how landscape design is practiced here in Austin has been invaluable. The Innovation Grant was instrumental to spurring this effort forward. The evaluation and processes that I have acquired this semester will be utilized in the ongoing development of this class and in the continual improvement of all courses that I teach in future. I look forward to testing this course and introducing students to landscape design drafting soon.