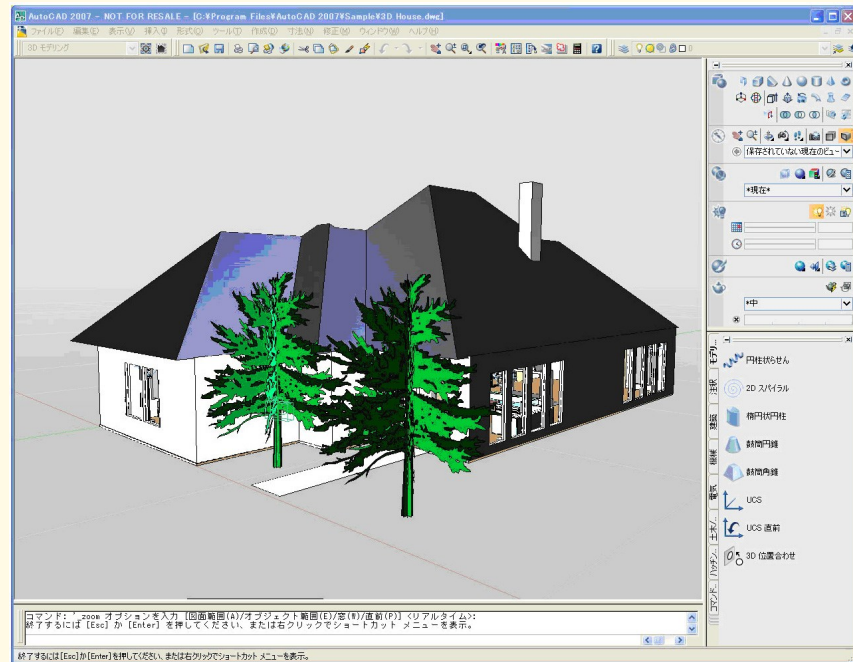


Academic Program Review: Creating a 21st Century **Drafting Program**

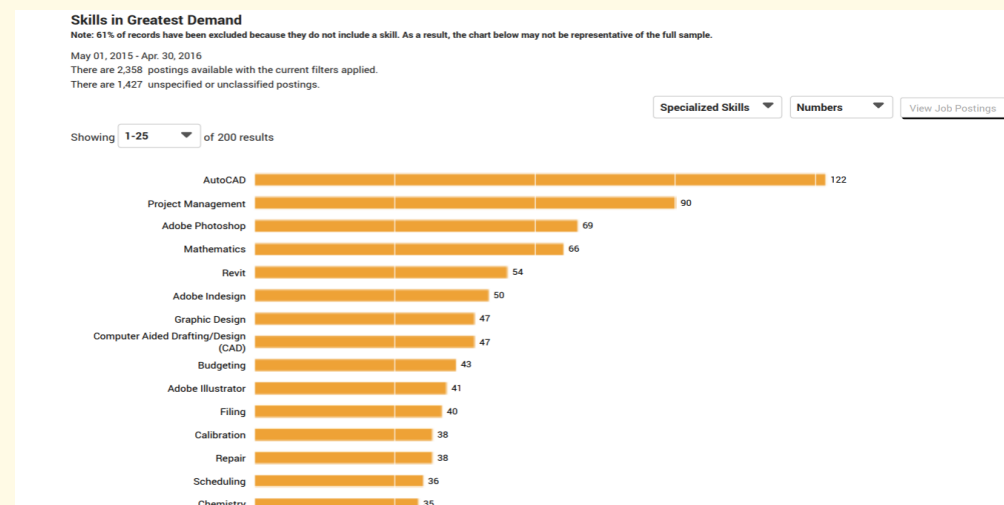
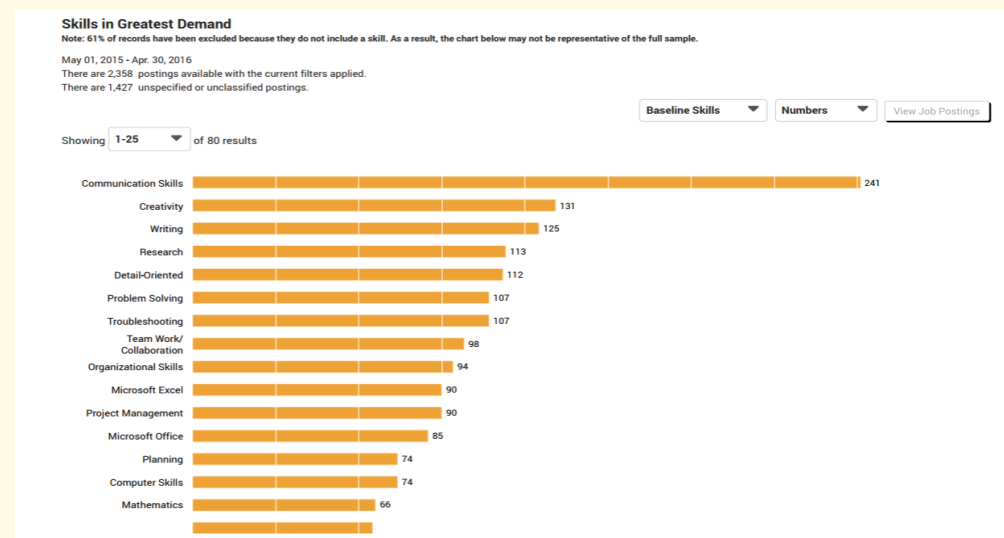
Inquiry Theme:

How relevant is Lane's Drafting Program for our 21st century graduates? Are we giving students what they need? Should we retool?



Looking at the Data

- ◆ Where are the most drafting and design jobs locally? (Portland has the most jobs advertised, with Eugene areas over 800 relevant jobs posted)
- ◆ What are the current job titles for drafting and design work? (Most popular: "Graphic Designer" and "Engineering Technician")
- ◆ How many jobs in the field require an AA degree
- ◆ (e.g., 709 in 2016)?
- ◆ What are the top industry sectors for Drafting jobs? (Professional, Scientific, Technical and Manufacturing Sectors)
- ◆ Looked at top employers (from Nike to Bureau of Land Management)
- ◆ Looked at salaries (Vast majority over \$35,000; most between \$50-75,000)



Synthesizing the Data

- ◆ A changing field: Burning Glass real-time labor market data revealed that Drafting graduates require more robust and more diverse skills than drafters trained five to ten years ago.
- ◆ Change in skill levels: Jobs are now multidisciplinary and have higher skill levels with rising levels of responsibility.
- ◆ Drafting is still relevant: Our community would benefit from an updated program that trained workers for 21st century digital design and drafting careers with family wage jobs.

To meet the complex skill needs of future students, we focused our changes on curriculum

An updated mission statement: *The Drafting program trains and prepares graduates from diverse backgrounds to work with and assist architects, engineers, other designers, and technicians as part of construction, manufacturing, or engineering teams. Coursework prepares graduates to work collaboratively as design paraprofessionals across a range of capacities using a variety of software platforms. Students build skills in problem-solving, analysis, technical graphics, and basic design. Successful graduates are able to communicate effectively in multiple formats.*

Relevant Outcomes: We developed a matrix of discipline-specific outcomes, with knowledge, skills, and habits of mind grouped into categories: Software, Drafting and Graphical Skills, Design Skills, Communication Skills, and Organizational and Professional Skills and Attributes

Course mapping and gap analysis: Identified course revisions needed, outmoded courses to be phased out, and new course development needs.

New and revised courses: Developed course outcomes, content, and preliminary assessment modes for new and revised Drafting courses.

- ◆ DRF 160: Content of slower-paced CAD 1 and CAD 2 courses merged into a single, more-rigorous CAD course.
- ◆ DRF 137 and 208: Content of two redundant architectural courses—Residential Buildings and Architectural Plans—merged into one existing course. The two architectural courses, Architectural Plans and Commercial Buildings, revised to meet outcomes.
- ◆ DRF 235 and 236: Content of three 2nd-year mechanical courses—Mechanical Design, Geometric Dimensioning and Tolerancing, and Power Trains and Accessories—merged into two courses, Mechanical Design Skills and Machine Elements
- ◆ Electives added and new 3D printer lab added
- ◆ Revised AAS degree and one-year certificate program to incorporate course changes.

Methodology:

Data Sources for Collection/Analysis

- ◆ Advisory Committee workshops with local employers
- ◆ Burning Glass real-time labor market inventory data for drafting and design job postings in Oregon and Lane County, 2015-16
- ◆ Peer reviewer from Portland Community College
- ◆ Literature review: middle-skill STEM education and employment research