

Student Learning Outcomes Assessment Summary

Drafting Technology, Certificate

Community and Technical College

2013/2014

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1. Assessment information collected

- a) Faculty have collected and reviewed student work on an ongoing basis. Adjunct Faculty (who are typically professionals working in the architectural and engineering fields) participate in this collection and review.
- b) A universal exam has not been administered to students completing DRT F170. The expense, administrative hurdles, and questions about the validity of the nationally recognized exam are delaying implementation.
- c) Employers were interviewed on an ad-hoc basis and via the DRT Advisory Committee to evaluate satisfaction with graduates.

2. Conclusions drawn from the information summarized above

- a) Students are entering more advanced drafting courses, and therefore leaving earlier drafting courses, with an unacceptably wide range of competency in computer aided drafting.
- b) Students are entering more advanced drafting courses with an unacceptably wide range of knowledge of construction technology. Some are not sufficiently prepared.
- c) Students are often forced to complete course out of sequence due to the program size and conflicts with other coursework.
- d) The advent of new design software has complicated the sequence of courses and development of skills and knowledge needed to apply that software.
- e) Additional time needs to be spent on instruction specific to software applications.
- f) The Mechanical and Electrical Drafting course, DRT F155, has inadequate time to teach drafting and design related to both disciplines.
- g) Students lack familiarization with accepted standards of practice in AutoCAD, including customization and application of standards.
- h) Graduates successful at finding employment are meeting or exceeding expectations of employers.

- i) Computation skills appear adequate for most drafting related tasks. Geometry skills are marginal or below expectations in most students.
- j) Writing skills are below expectations and aren't at the level they should be for successful employment.

3. Curricular changes resulting from conclusions drawn above

- a) Use of a uniform set of outcomes will be required for all DRT F170 Beginning CAD and DRT F210 Intermediate CAD courses.
- b) Outcomes for DRT F210 Intermediate CAD will be measured through the delivery of an exam. The nationally recognized exam has undergone revisions to address industry concerns about its applicability. If unable to purchase or proctor this exam, faculty members will develop an exam to be administered across all DRT F210 courses.
- c) The Mechanical and Electrical Drafting course, DRT F155, shall be split into separate courses, one for each discipline.
- d) Drafting standards based on the National CAD Standard will be introduced into the course DRT F101 Intro to Drafting.
- e) Advising for Drafting Technology courses will place more emphasis on course sequence in order that students enter fully prepared for a course with an adequate level of construction technology knowledge for that discipline.
- f) The entire sequence of Drafting Technology coursework shall be reviewed for the proper introduction of Computer Aided Drafting (CAD) and Building Information Modeling (BIM) software. Skills in both software types are needed by DRT graduates. DRT has sequence of coursework that builds CAD skills progressively. BIM requires the same consideration and approach.
- g) Geometry skills will be introduced and emphasized in DRT F101 Intro to Drafting.
- h) 200 level drafting courses will incorporate increased writing requirements and review to ensure graduates can effectively communicate when entering the workforce. Students need to be reminded their communications courses are relevant to their field of study.

4. Identify the faculty members involved in reaching the conclusions drawn above and agreeing upon the curricular changes resulting

The Drafting Technology program relies upon our many excellent and experienced Adjunct Faculty members to teach our courses. The changes above have been discussed and reviewed with our faculty as time and circumstance allowed, including the following individuals:

Karl Bergman, Adjunct Faculty
Jason Colquhoun, Adjunct Faculty
Elizabeth Johnson, Adjunct Faculty
Galen Johnson, Associate Professor, Construction Management and Drafting
Technology Department Chair
Thane Magelky, Assistant Professor, Drafting Technology Program Head
Brian Marmor, Adjunct Faculty
Adam McDermott, Adjunct Faculty
Chris Miller, Adjunct Faculty
Janet Smith, Adjunct Faculty

Faculty that have approved these curricular changes include the following:

Galen Johnson, Associate Professor, Construction Management and Drafting
Technology Department Chair
Thane Magelky, Associative Professor, Drafting Technology Program Head