DRAFTING FUNDAMENTALS
Course Syllabus

Course Number: ACA-0997  
OHLAP Credit: No
OCAS Code: None
Course Length: 45 Hours
Career Cluster: Architecture & Construction
Career Pathway: Construction
Career Major(s): Construction Academy

Pre-requisite(s): This course is an introduction to general drafting techniques, procedures, and occupations. Students will be able to use drafting instruments to learn basic drafting techniques and applications. Orthographic projection, isometric drawings, and basic architecture will be introduced and discussed.

Textbooks:

Course Objectives:

A. Complete General Safety Requirements.
   1. Discuss general safety requirements for classroom activities.
   2. Discuss safety requirements specific to the drafting profession.
   3. Use tools and equipment safely.
   4. Pass a safety test with a 100% score.

B. Explore Career Opportunities In Drafting.
   1. Discuss the history of drafting.
   2. Discuss the different areas where drafters are employed.
   3. Survey local job opportunities.
   4. Complete a sample job application.
   5. Demonstrate attitudes that promote job advancement.
   6. Discuss opportunities for advancement in the drafting field.
   7. Discuss reasons for participation in professional organizations.

C. Demonstrate An Understanding Of Basic Drafting Fundamentals
   1. Perform lettering.
      a. Explain the importance of good lettering.
      b. Demonstrate the strokes of vertical gothic lettering.
   2. Demonstrate the use of Ames Lettering Guide.
   3. Demonstrate the use of Alphabet of Lines.
   4. Demonstrate the use of a variety of scales.
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a. Describe the scales on the engineers scale.
b. Use a standard scale on assigned projects.

D. Demonstrate Three View Drawings.
   1. Describe the Theory of Multiview Projections.
   2. Identify the three basic views in orthographic drawings.
   3. Locate width, height, and depth on all six major views.

E. Demonstrate Knowledge Of Isometric Drawings.
   1. Discuss axonometric, trimetric and isometric drawings.
   2. Show the major isometric axis.
   3. Produce and dimension isometric drawings.

F. Discuss Introduction To Architecture.
   1. Differentiate the job requirements and qualifications for an architectural drafter, an architectural designer, and an architect.
   2. Identify six distinct styles of residential architecture.
   3. Discuss factors which contribute to the development of modern or futuristic homes.
   4. Explain architectural design as it relates to form and function.

G. Demonstrate Dimensioning Rules.
   1. Explain the basic dimensioning rules.
   2. List the ten most important rules.
   3. Review arrowheads, leader lines, extensions and dimension lines.

1 ODCTE objective
2 NCCER objective

Teaching Methods: The class will primarily be taught by the lecture and demonstration method and supported by various media materials to address various learning styles. There will be question and answer sessions over material covered in lecture and media presentations. Supervised lab time is provided for students to complete required projects.

Grading Procedures: 1. Students are graded on theory and shop practice and performance.
2. Each course must be passed with seventy (70%) percent or better.
3. Grading scale: A=90-100%, B=80-89%, C=70-79%, D=60-69%, F=50-59%.

Description of Classroom, Laboratories, and Equipment: Tulsa Technology Center campuses are owned and operated by Tulsa Technology Center School District No. 18. All programs provide students the opportunity to work with professionally certified instructors in modern, well-equipped facilities.
<table>
<thead>
<tr>
<th>Available Certifications/ College Credit</th>
<th>The student may be eligible to take state, national or industry exam after completion of the program. College credit may be issued from Oklahoma State University-Okmulgee or Tulsa Community College. See program counselor for additional information.</th>
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<tbody>
<tr>
<td>College Credit Eligibility:</td>
<td>The student must maintain a grade point average of 2.0 or better.</td>
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