



Course Competencies Template - Form 112

GENERAL INFORMATION											
Name:	Phone #:										
Course Prefix/Number: ETD 1110	Course Title: Technical Drawing										
Number of Credits: 4											
Degree Type	<input type="checkbox"/> B.A. <input type="checkbox"/> B.S. <input type="checkbox"/> B.A.S. <input type="checkbox"/> A.A. <input checked="" type="checkbox"/> A.S. <input type="checkbox"/> A.A.S. <input checked="" type="checkbox"/> C.C.C. <input type="checkbox"/> A.T.C. <input type="checkbox"/> V.C.C.										
Date Submitted/Revised:	Effective Year/Term:										
<input type="checkbox"/> New Course Competency <input type="checkbox"/> Revised Course Competency											
Course to be designated as a General Education course (part of the 36 hours of A.A. Gen. Ed. coursework): <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No											
College Wide General Education Student Learning Outcomes (CWGESLO) legend: <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">1. Communication</td> <td style="width: 50%;">6. Social Responsibility</td> </tr> <tr> <td>2. Numbers / Data</td> <td>7. Ethical Issues</td> </tr> <tr> <td>3. Critical Thinking</td> <td>8. Computer / Technology Usage</td> </tr> <tr> <td>4. Information Literacy</td> <td>9. Aesthetic / Creative Activities</td> </tr> <tr> <td>5. Cultural / Global Perspective</td> <td>10. Environmental Responsibility</td> </tr> </table>		1. Communication	6. Social Responsibility	2. Numbers / Data	7. Ethical Issues	3. Critical Thinking	8. Computer / Technology Usage	4. Information Literacy	9. Aesthetic / Creative Activities	5. Cultural / Global Perspective	10. Environmental Responsibility
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Course Description (limit to 50 words or less, <b>must correspond with course description on Form 102</b> ):  Introduces students to the principles of instrument drawing, orthographic projection, visualization, specialized computer processes and introductory computer aided drawing (CAD). Students develop drawing and sketching techniques common to industry.											
Prerequisite(s):	Corequisite(s):										

**Course Competencies:**

Competency 1:	CWGESLO
The student will demonstrate understanding of drawing standards, conventions, and categories by:	2, 4

- a) Recognizing industry-standard drawing formats, symbols, abbreviations, and notation conventions, such as ANSI, ISO, or ASME standards.
- b) Recognizing different types of engineering drawings, including orthographic projections, isometric drawings, section views, and assembly drawings.

Competency 2:	CWGESLO
The student will demonstrate proficiency in technical sketching by:	9

- a) Developing freehand sketches to quickly communicate design ideas and concepts.
- b) Creating precise and clean lines, including the proper use of line weights.

Competency 3:	CWGESLO
The student will demonstrate proficiency in geometry and dimensioning by:	2, 8, 9

- a) Drawing principles of geometric construction, such as circles, ellipses, polygons, and splines.
- b) Dimensioning drawings accurately using linear, angular, and radial dimensions.

Competency 4:	CWGESLO
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The student will demonstrate proficiency in Multiview Projections by:	2, 8
a) Mastering the creation of orthographic projections (front, top, side views) from 3D objects and vice versa.	
Competency 5:	CWGESLO
The student will demonstrate proficiency in sectional views by:	2, 8
a) Creating sectional views to reveal internal details of complex objects.	
b) Correctly using and explaining cutting-plane lines and section lining conventions.	
Competency 6:	CWGESLO
The student will demonstrate proficiency in auxiliary views by:	2, 8
a) Generating auxiliary views to represent inclined or oblique surfaces accurately.	
b) Constructing auxiliary views from orthographic projections.	
Competency 7:	CWGESLO
The student will demonstrate proficiency in isometric and 3d drawings by:	2, 8
a) Creating isometric drawings to represent 3D objects in a simplified and realistic manner.	
b) Exploring 3D modeling and visualization techniques using CAD software.	
Competency 8:	CWGESLO
The student will demonstrate proficiency in assembly and exploded views by:	2, 8
a) Creating assembly drawings that show how multiple parts fit together.	
b) Presenting exploded views to illustrate component relationships	
Competency 9:	CWGESLO
The student will demonstrate proficiency in detailing and notation by:	2, 8
a) Detailing drawings by adding information such as surface finishes, welding symbols, and bill of materials (BOM).	
b) Utilize common notation for threads, fasteners, and weld joints.	
Competency 10:	CWGESLO
The student will demonstrate proficiency in CAD Software by:	2, 8
a) Using computer-aided design (CAD) software to create, edit, and annotate engineering drawings.	
Competency 11:	CWGESLO
The student will demonstrate proficiency in Drawing Interpretation by:	1, 2, 8
a) Analyzing engineering drawings produced by others.	
b) Identifying design intent, manufacturing processes, and potential issues.	
Competency 12:	CWGESLO
The student will demonstrate proficiency Communication and Collaboration by:	1
a) Presenting and explaining drawings and design concepts.	
b) Showing written and verbal communication skills for effective collaboration with engineers, designers, and other stakeholders.	
Competency 13:	CWGESLO
The student will show understanding of Ethical and Professional Standards by:	6, 7
a) Discussing the importance of ethical conduct, intellectual property rights, and responsible engineering practices in the context of technical drawing.	

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