



Course Competencies Template - Form 112

GENERAL INFORMATION											
Name:	Phone #:										
Course Prefix/Number: ETD 1542	Course Title: Structural Drafting										
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: Development of structural, fabrication and erecting drawings. The course involves the study of structural shapes, their properties, and methods of developing connections, as well as the study of common reinforced concrete practices. Prerequisite: ETD 1110. Laboratory fee.											
Prerequisite(s): ETD 1110	Corequisite(s):										

Course Competencies:

Competency 1:	CWGESLO
The student will demonstrate understanding of Basic Structural Concepts by:	1, 2, 8
a) Identifying fundamental structural engineering concepts, including load-bearing, forces, stresses, and materials used in construction. b) Identifying various structural elements such as beams, columns, foundations, walls, and roofs. c) Describing structural engineering principles such as load distribution and the behavior of structural components under different loads. d) Identifying and explaining different construction methods and systems, including steel, concrete, wood, and masonry.	
Competency 2:	CWGESLO
The student will demonstrate proficiency in blueprint reading by:	1, 2
a) Reading, interpreting, and explaining architectural and engineering drawings, including floor plans, elevations, sections, and details.	
Competency 3:	CWGESLO
The student will demonstrate proficiency in hand drafting by:	4, 9
a) Creating schematic drawings by hand, including orthographic projections, isometric drawings, and section views.	

Revision Date: _____	Approved By Academic Dean Date: _____	Reviewed By Director of Academic Programs Date: _____
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Competency 4:	CWGESLO
The student will demonstrate proficiency in the use of drafting software by:	2, 8
<ul style="list-style-type: none"> a) Creating 2D and 3D structural drawing using industry-standard Computer-Aided Design (CAD) Software such as AutoCAD, Revit or similar tools. 	

Competency 5:	CWGESLO
The student will demonstrate proficiency in dimensioning and detailing by:	2, 3, 8
<ul style="list-style-type: none"> a) Creating detailed drawings that incorporate specifications, symbols, and annotations for construction. b) Using accurate measurement techniques, scaling, and dimensioning practices to ensure drawings adhere to industry standards. c) Identifying and correcting mistakes and overlaps that can occur in a project. 	

Competency 6:	CWGESLO
The student will demonstrate proficiency in the interpretation of results produced by a structural analysis software by:	1, 2, 8
<ul style="list-style-type: none"> a) Being able to interpret and explain the results produced by structural analysis software tools to assist in the design of structural components 	

Competency 7:	CWGESLO
The student will be able to demonstrate his capacity in project reporting and collaboration by:	1, 3
<ul style="list-style-type: none"> a) Creating comprehensive documentation packages, including reports, calculations, and as-built drawings. b) Showing effective written and verbal communication and collaboration needed to work closely with architects, engineers, and construction professionals in a team environment. 	

Competency 8:	CWGESLO
The student will demonstrate proficiency in basic project management by:	1, 2, 4
<ul style="list-style-type: none"> a) Providing an overview of project management principles, including project scheduling, cost estimation, and project documentation. 	

Competency 9:	CWGESLO
The student will demonstrate proficiency in the execution of real word projects by:	2, 3, 8
<ul style="list-style-type: none"> a) Applying their skills in creating structural drawings for actual construction projects. 	

Competency 10:	CWGESLO
The student will demonstrate understanding of legal and ethical considerations by:	3, 7
<ul style="list-style-type: none"> a) Discussing the ethical responsibilities of drafters, including issues related to confidentiality, integrity, and professional conduct. b) Exploring ethical responsibilities in structural drafting. 	

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