



LIST ALL COURSES REQUIRED AND IDENTIFIED COMPETENCIES

Competencies								Course Number	Course Title
1	2	3	4	5	6	7	8		
X		X	X	X				DFTG 1405	Introduction to Technical Drawing
X		X	X	X		X	X	DFTG 1409	Basic Computer-Aided Drafting
X		X	X	X		X	X	DFTG 1410	Specialized Basic Computer-Aided Drafting (CAD)
X		X	X	X	X	X	X	DFTG 1417	Architectural Drafting, Residential
X	X	X	X	X	X	X	X	DFTG 2319	Intermediate Computer-Aided Drafting
X		X	X	X	X	X	X	DFTG 1430	Civil Drafting I
X	X	X	X	X	X	X	X	DFTG 2406	Machine Design
X	X	X	X	X	X	X	X	DFTG 2407	Electrical Drafting
X	X	X	X	X	X	X	X	ARCE 1352	Structural Drafting
X	X	X	X	X	X	X	X	DFTG 2338	Final Project – Advanced Drafting
X	X	X	X	X	X	X	X	DFTG 2423	Pipe Drafting
X	X	X	X	X	X	X	X	DFTG 2432	Advanced Computer-Aided Drafting
								MATH 1314	College Algebra
								MATH 1316	Plane Trigonometry
								ENGL 1301	Composition I
								Elective	Humanities / Fine Arts
								Elective	Social & Behavioral Sciences

COMPETENCY REFERENCES

	8 Basic use of computers
	7 Workplace Competencies: resources; interpersonal skills; information; systems; and technology.
	6 Personal Qualities: A worker must display responsibility, self-esteem, sociability, self-management, integrity, and honesty.
	5 Thinking Skills: A worker must think creatively, make decisions, solve problems, visualize, know how to learn, and reason effectively.
	4 Speaking and Listening: Organize ideas and communicate orally; receive, attend to, interpret, and respond to verbal messages and other cues.
	3 Arithmetic or Mathematics: Perform basic computations and approach practical problems by choosing appropriately from a variety of mathematical techniques.
	2 Writing: Communicate thoughts, ideas, information, and messages in writing, and create documents such as letters, directions, manuals, reports, graphs, and flow charts.
	1 Reading: Locate, understand, and interpret written information in prose and in documents such as manuals, graphs, and schedules.

SCANS Competencies Checklist

Academic Year: 2024-2025

SCANS COMPETENCIES FOR PROGRAM: Engineering Design: AAS

Competency	Course where Competency is Assessed	Method of Assessment	Improvements as a Result of Assessment Findings
1 READING: Locate, understand, and interpret written information in prose and in documents such as manuals, graphs, and schedules.	DFTG1405 – Introduction to Technical Drawing	Assignment: Final Project Students will incorporate all basic drafting skills learned throughout the semester.	All students met the criteria. The instructor will enforce lettering skills during assignments.
2 WRITING: Communicate thoughts, ideas, information, and messages in writing, and create documents such as letters, directions, manuals, reports, graphs, and flow charts.	DFTG2423 – Pipe Drafting	Assignment: Pipe Arrangement Drawing Students will create a lab exercise that incorporates: Battery Limits, Foundations located correctly through coordinates, labeling of arrangement drawing, Reproduction of vertical/horizontal vessels including nozzles, and be able to plot to scale.	78% of students met the criteria. The instructor will advise students to verify that all information is displayed before submitting.
3 ARITHMETIC OR MATHEMATICS: Perform basic computations and approach practical problems by choosing appropriately from a variety of mathematical techniques.	DFTG2423 – Pipe Drafting	Assignment: Exercise 5-3 Using the appendices located in the book, students will calculate fitting make-up (FMU).	67% of students met the criteria. The instructor reviewed the assignment to show students how to break down the components and extract the information from the tables. The instructor will provide more examples.
4 SPEAKING AND LISTENING: Organize ideas and communicate orally; receive, attend to, interpret, and respond to verbal messages and other cues.	DFTG2338 – Final Project, Advanced Drafting	Assignment: Motor Control Station or Piping or Missile Site Drawing – students will create one of the three assignments listed. Each lab will focus on terminology, material covered in courses, and students' efficiency with the CAD software needed.	89% of students met the criteria. The instructor will advise students to verify that all information is displayed before submitting. Minor mistakes were caught.
5 THINKING SKILLS: A worker must think creatively, make decisions, solve problems, visualize, know how to learn, and reason effectively.	DFTG2323 – Pipe Drafting	Assignment: Daily assignment Students must draw the correct run of pipe, label coordinates, label run of pipe, flow arrows, valves, and any important information.	78% of students met the criteria. A few students got the projection of the pipeline incorrect. The instructor will continue to provide as many examples as possible.

Competency	Course where Competency is Assessed	Method of Assessment	Improvements as a Result of Assessment Findings
<p>6 PERSONAL QUALITIES: A worker must display responsibility, self-esteem, sociability, self-management, integrity, and honesty.</p>	<p>DFTG2423 – Pipe Drafting</p>	<p>Assignment: Piping Abbreviations</p> <p>Students will be quizzed on the piping abbreviations selected by the instructor. Abbreviations are used to make students aware of terminology used in the piping industry.</p>	<p>All students met the criteria.</p> <p>The instructor will provide examples to improve studying skills.</p>
<p>7 WORKPLACE COMPETENCIES: resources; interpersonal skills; information; systems; and technology</p>	<p>DFTG1410 – Special Topics in Basic Computer-Aided Drafting</p>	<p>Assignment: Creating a File Hierarchy</p> <p>Students are to create a file hierarchy as specified by the instructor; save all drawing files in specified folders; create a screen capture and submit for evaluation twice during the semester.</p>	<p>All students met the criteria.</p> <p>The instructor will continue to monitor.</p>
<p>8 BASIC USE OF COMPUTERS</p>	<p>DFTG2432 – Advanced CAD</p>	<p>Assignment: Access Database</p> <p>Students will create a job database, create queries, and reports based on three disciplines.</p>	<p>All students met the criteria.</p> <p>The instructor will continue to monitor.</p>