

Career and Technical Education

Certificate of Achievement – Welding Technology

Student Learning Outcomes

Graduates of the Welding Technology Certificate of Achievement Program will have the knowledge and skills to:

- Make satisfactory welds in all positions using the following welding processes:
 - Shielded Metal Arc Welding (SMAW)
 - Gas Metal Arc Welding (GMAW)
 - Flux Cored Arc Welding (FCAW)
 - Gas Tungsten Arc Welding (GTAW)
- Make satisfactory cuts with the following processes:
 - Oxygen Fuel Cutting (OFC)
 - Plasma Arc Cutting (PAC)
 - Air Carbon Arc Cutting (ACC)
- Interpret welding blueprints and welding symbols.
- Perform pipe layouts.
- Utilize basic welding metallurgy.
- Perform safely in the work environment, meeting and obeying all workplace safety requirements.

Formal admission to this program is required. Refer to page 86 for an outline of admission standards.

General Education Requirements		Credits
INT 100	GBC Orientation.....	0.5
	English/Communications. Determined by placement testing.....	3
	ENG 100, 101, 103, or 107	
	Computation — Any course with a MATH prefix.....	3
	Human Relations	
	BUS 110 (recommended).....	1-3

Program Requirements		Credits
WELD 105	Drawing and Weld Symbol Interpretation.....	3
WELD 110	Basic Arc Welding Principles and Practices**.....	5.5
WELD 150	Metallurgy Fundamentals for Welding.....	3
WELD 160	Welding Design/Layout and Pipefitting.....	5.5
WELD 210	Advanced Welding Principles and Practices.....	5.5
WELD 220	Gas Metal (GMAW) and Flux Cored Arc Welding (FCAW).....	11
WELD 240	Gas Tungsten Arc Welding (GTAW).....	7
WELD 260	Pipe Welding.....	8

SUGGESTED COURSE SEQUENCE Certificate of Achievement— Welding Technology

FALL—1st Semester		Credits
INT 100		0.5
ENGLISH*		3
COMPUTATION*		3
HUMAN RELATIONS*		1-3
WELD 105		3
WELD 110		5.5
WELD 210		5.5
WELD 260		8
TOTAL		29.5-31.5

SPRING—2nd Semester		Credits
WELD 150		3
WELD 160		5.5
WELD 220		11
WELD 240		7
TOTAL		26.5

Refer to page 85. Minimum Credits: 56
***Choose with an advisor.**

**Students who have credit for WELD 136 from previous course enrollment or CTE College Credit (see page 23), contact a GBC advisor. Course requirement for WELD 110: 5.5 units of WELD 110 or 2.5 units of WELD 110 and 3 units of WELD 136.

Certificate of Achievement Requirements Summary

	Credits
GBC Orientation (select programs)	0.5
English/Communications.....	3
Computation	3
Computation includes the ability to:	
<ul style="list-style-type: none"> • Interpret mathematical models • Represent mathematical information symbolically, visually, numerically, and verbally • Estimate and check answers 	
Must be included as a course or demonstrate how computation components are embedded in other required courses for a Certificate.	
Minimum Certificate Requirements	23
(See program for specific requirements)	
Human Relations	1-3

A minimum of 30 total credits is required. Many programs require more.

Career and Technical Education Admission

Admission standards for the Associate of Applied Science and Certificate of Achievement in the Career and Technical Education (CTE) area for disciplines in Diesel Technology, Electrical Systems Technology, Instrumentation Technology, Industrial Millwright Technology, and Welding Technology are listed below.

Application Deadline: March 1

Prospective students are required to formally apply for admission to the Career and Technical Education (CTE) Department. To do so:

1. The prospective student needs to pick up a CTE Department Admissions Application form from the CTE Department (not from Admissions and Records), fill it out, and return it to the CTE Department by March 1. (Please make sure to declare a major on this form.) The CTE department is located in DCIT 255.
2. Along with the CTE Department Admissions Application form, the student needs to submit to the CTE Department:
 - a. Three letters of recommendation.
 - b. A resumé.
 - c. A letter of intent.
 - d. High school transcripts or HSE scores if applicable, military training records if applicable, and/or higher education records if applicable.

- e. By March 1, the prospective student needs to submit ACT or SAT scores or take the placement tests for mathematics and English at the GBC Academic Success Center in Elko or at any GBC Center.

Admission Criteria

The Career and Technical Education Department will admit a limited number of students to the CTE Department area programs each year. Admission is on a competitive basis. When there are more qualified applicants than there are available spaces in the programs, preference will be given to those with the highest qualifications. Meeting minimum application criteria does not guarantee admission to the program. Those students who meet or exceed the minimum criteria but who are not admitted may reapply in future years. Please check with the program advisor for more information.

Associate of Applied Science Degree

The Associate of Applied Science (AAS) degree is designed for persons who desire education for an occupation or a technical career. The courses and programs of the AAS degree aim to prepare students for entry-level employment. Students also use the career and technical education programs to upgrade themselves in the positions they hold. Many persons enroll in career and technical courses to improve their abilities and understanding of everything from management to welding, from financial planning to computing.

In general, career and technical courses are not meant to satisfy requirements of lower-division baccalaureate programs, but do prepare students for GBC’s Bachelor of Applied Science degree. The career and technical education programs provide a generous component of liberal education coursework which is meant to develop intellectual curiosity and which promotes creative thought. The general education courses are university transfer courses.

Important Note:

Some courses offered at Great Basin College may not be used for an Associate of Arts, Associate of Science, or Bachelor of Arts degree. These courses may not be transferable to other Nevada colleges. These courses are identified in the catalog course descriptions with the following notation:

This course cannot be used for an Associate of Arts (A.A.), Associate of Science (A.S.), a Bachelor of Arts (B.A.) degree, or Bachelor of Science (B.S.), and may not be transferable for other baccalaureate degrees in Nevada.

These courses are identified with a “class attribute” in the online course schedule with the following notation: Non-transferable for an NSHE baccalaureate degree.