

**ADVANTAGES**

The welding technology program is taught according to the standards set by the American Welders Society (AWS) and is AWS-certified.

**PROGRAM STUDENT LEARNING OUTCOMES**

- Demonstrate mathematical operations using accepted mathematical applications.
- Practice shop safety and welding safety.
- Perform straight, bevel and cuts using manual and automatic oxyfuel and plasma equipment.
- Set up and operate constant current welding equipment.
- Set up and operate constant voltage welding equipment.
- Perform fillet and groove welds in all positions on carbon steel plate.
- Perform fillet and groove weld on pipe in all positions.
- Identify and describe the heat relationship to the grain structure of various metals.
- Maintain and develop testing and inspection records.
- Demonstrate layout and fabrication skills resulting from the previous materials used in program.

**DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAM**

Build on your associate degree to complete a bachelor's 100% online. Alfred State welding technology graduates may enter directly into the technology management BBA degree program. Graduates who have credit for freshman composition, statistics, literature, history, and speech may complete the BBA program in two additional years; others may complete the BBA program in two-and-one-half years.

**OCCUPATIONAL OPPORTUNITIES**

- |                    |                    |
|--------------------|--------------------|
| Industrial welder  | Self-employment    |
| Steel construction | Fabrication welder |
| Equipment repair   | Structural welder  |

**ENTRANCE REQUIREMENTS/RECOMMENDATIONS**

Recommended: In-depth knowledge of basic math skills.

**TECHNICAL STANDARDS**

- Applicants for the welding program must meet the following physical requirements:
- Must be able to perform safely in the shop.
- Must be able to lift 50 pounds to eye level.
- Must be able to communicate effectively with a person six to 10 feet away in a shop environment.
- Must be able to diagnose mechanical failures that are distinguished audibly.
- Must be able to understand and retain information found in service repair manuals and use diagnostic flow charts.
- Must be able to visually read an LCD display on welding equipment.
- Must have the dexterity and mobility to weld in all the welding positions to meet all requirements.

This high-tech program focuses on welding processes performed in all positions on both plate and pipe. You will learn proper safety methods, required math, related skills, layout and fit up, welding codes and standards, welding inspection, testing, and drawing/welding symbol interpretation.

The first year, students will complete AWS Level I standards for an entry-level welder. The second year will take students toward AWS Levels II - advanced welder and expert welder. Additional techniques such as high-pressure vessel and high-pressure pipe will be taught, as well as other advanced welding techniques.

*Hit the ground running®...*



**NORTHLAND**  
WORKFORCE TRAINING CENTER  
**683 Northland Ave.**  
**BUFFALO, NEW YORK**

## Get the Alfred State ADVANTAGE



As an Alfred State Pioneer, you are on track for success.

You want to move ahead, make things happen, reach your goals, and start your career.

Through hands-on experience and applied learning you gain a head start.

With the Alfred State Advantage, you're one step ahead and will **Hit the ground running®...**

### PIONEER STUDENT QUOTES:

"I knew others who came through welding and they got great jobs!"  
-Madelyn Wellington, '17

"Alfred State's welding program is one of the best. I figured with their 99% placement - it would be great!" -Tyler Townsend, '17

### APPLICATION PROCEDURES:

- Complete the SUNY application ([www.SUNY.edu/attend](http://www.SUNY.edu/attend)); current high school seniors should also complete the SUNY Supplemental Application form
- Indicate the following:
  - Alfred State College code—91
  - Special Campus Project code—NORTH
- Forward the additional required documents to the Alfred State Admissions Office (10 Upper College Drive, Alfred, NY 14802):
  - Official high school transcript
  - GED/TASC scores and diploma
  - SUNY Supplemental Application or essay (topic of your choice although applicants are encouraged to share information on any related experience and/or reasons for interest in program)
  - Official college transcripts if college course work was taken after high school graduation

*Alfred State does not discriminate on the basis of race, color, national origin, religion, sex, disability, honorably discharged veteran or military status, sexual orientation, genetic information, or age in its programs and activities.*

Admissions@AlfredState.edu | 1-800-4-ALFRED

**Apply Now: [www.SUNY.edu/attend](http://www.SUNY.edu/attend)**

### TYPICAL FOUR-SEMESTER PROGRAM

#### First

WELD	1724	Gas Wldng/Cutng & Plasma Cutng	4
WELD	1733	Weld Mtlrgy, Blpnt Rdng, Insp, Ts	3
WELD	1104	Intro Shielded Metal Arc Weldg	4
WELD	1204	SMAW I, Carbon Arc Cutting &Goug	4
WELD	1723	Welders Calculations I	3
			<b>18</b>

#### Second

WELD	2715	Shld Mtl Arc & Flx Crd Arc Wld	5
WELD	2725	Gas Metal Arc Welding	5
WELD	2735	Gas Tungsten Arc Welding I	5
WELD	2733	Tolerancing & Working Drawings	3
			<b>18</b>

#### Third

WELD	3005	SMAW II, Codes/ Insp Basic CNC	5
WELD	3015	GMAW II, FCAW II	5
WELD	3025	GTAW II Comp of Materials	5
WELD	3813	Metlgy, Code, Cert, Insp & Tst	3
			<b>18</b>

#### Fourth

WELD	4425	GMAW III, FCAW III, SAW	5
WELD	4435	SMAW III, GTAW III	5
WELD	4445	Welding Fabrication	5
WELD	4013	Senior Project	3
			<b>18</b>

### GRADUATION REQUIREMENTS

A student must successfully complete all courses in the prescribed four-semester program and earn a minimum cumulative index of 2.0, which is equivalent to a "C" average. Students are required to earn a grade of "C" or higher in WELD 1723 to be eligible for graduation. (Articulation is available in this area.)

A "C" or higher must also be received for WELD 4013.



Computerized Design  
& Manufacturing Dept.



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