

Coordinating Commission for Postsecondary Education Review of Existing Instructional Programs

Institution: Central Community College **Program:** Welding Technology

I certify the following:

- the information provided regarding this program is accurate
- the above named institution has in place a procedure for reviewing instructional programs
- such review took place and was presented to the institution's governing board on **May 19, 2022**
- the governing board's action was: _____

Signed: _____ (Chief Academic Officer or designated representative) _____ (Date)

Evidence of Demand and Efficiency

		16-17	17-18	18-19	19-20	20-21	5 yr avg
Student Credit Hours (SCH)		2,698	2,128	2,194	2,831	2,872	2,544.60
Faculty Full-time Equivalency (FTE)		8.39	7.39	7.69	7.70	7.55	7.74
SCH/Faculty FTE		321.57	287.96	285.31	367.66	380.58	328.69
Number of Degrees and Awards <i>(list degrees/awards separately)</i>	AAS	27	19	13	19	28	21.2
	Diploma	23	18	17	27	36	24.2
	Certificate	79	92	93	90	132	97.2
	Total Awards	129	129	123	136	196	142.6
	# of Unduplicated Graduates	86	80	78	83	104	86.2

Evidence of Need (provide a detailed explanation below or attach documentation)

See attached

Justification if the program is below either of the CCPE thresholds—complete page 2

For CCPE use: reviewer/date

Justification if the program is below CCPE thresholds—check one or more boxes and provide a detailed explanation or attach a document

☐ Program is critical to the role and mission of the institution (detailed explanation).

☐ Program contains courses supporting general education or other programs (detailed explanation).

☐ Interdisciplinary program (providing the program meets the requirements set in the existing policy for interdisciplinary programs) (explain).

☐ Student or employer demand, or demand for intellectual property is high and external funding would be jeopardized by discontinuing the program (explain).

☐ Program provides unique access to an underserved population or geographical area (explain).

☐ Program meets a unique need in the region, state, or nation (explain).

☐ Program is newly approved within the last five years (no additional justification needed).

☐ Other (detailed explanation).

Central Community College

Welding Technology

Coordinating Commission Seven-Year Review 2022

Information in this report reviewed and recommended to cabinet:

Central Community College Educational Services, 4/28/2022

Recommended continuation of programs without monitoring:

Central Community College College Cabinet, 05/11/2022
Central Community College Board of Governors, XXXXXX

Mike Consbruck – Program Faculty
Dave Hassett – Program Faculty
Landon Hunt – Program Faculty
Jeff Kroeker – Program Faculty
Brandon Piersol – Program Faculty
Mike Snell – Program Faculty
Bryce Standley – Program Faculty
John Willmes – Program Faculty

Alison Feeney – Associate Dean of Instruction, Skilled & Technical Sciences
Dr. Nate Allen – Dean of Instruction, Skilled & Technical Sciences
Dr. Jerry Wallace – Division Vice President, Skilled & Technical Sciences

Welding Technology

Program Review Summary – Dr. Nate Allen

The Welding Technology (WELD) program continues to be a successful program within the Skilled & Technical Sciences division at Central Community College serving multiple industries from manufacturing to agriculture. The WELD program is located at all three campuses utilizing eight full-time instructors and one part-time instructor. Grand Island added a third full-time instructor fall 2021. Now there are two full-time instructors in Columbus, three in Grand Island, and three in Hastings. Grand Island also utilizes a part-time instructor in the evenings. All three locations offer the three certificates, a diploma, and an AAS degree. Each location offers the program primarily through offerings during the day and all three offer evening classes for part-time students from industry or other program areas completing elective courses.

According to Economic Modeling Specialist International (EMSI) data, our service-area is considered a hotspot for welding jobs with 1,300 jobs posted in 21. Both our service-area and the state of Nebraska are expected to grow more (3.3% and 4.0%, respectively) than nationally (1.8%) over the next five years. According to advisory committee members, employers cannot hire enough welders fast enough.

The program is generating over 2,500 student credits per year and has an average ratio of student credit hours to full-time faculty equivalency (FTEF) of 328 over the past five years. Columbus and Hastings serve a blend of full-time and part-time students. Grand Island works with two area high schools to serve pathway students taking about six credits per semester on the Grand Island campus while still in high school. Many of these students continue in the program full-time once they graduate from high school.

WELD program faculty has awarded on average 21 AAS degrees annually over the past five years along with 24 diplomas and 97 certificates. Program enrollments are strong at each location with 84% of graduates employed full-time and/or continuing their education.

The Welding Technology program had an addition built a few years ago in Columbus. The program in Hastings was remodeled and faculty and students began in the new space January 2021. Grand Island is scheduled for a remodel of the classrooms and faculty office in 2022. Each location has added new equipment with the updating of facilities and assistance of Perkins funding. All three locations have purchased a welding simulator that is used for instruction and recruiting. The simulators allow students to learn about welding without the need for bystanders to wear PPE. The simulators are very popular at recruiting events.

The Welding Technology program exceeds the minimum thresholds for student credit hours to full-time equivalent faculty (FTEF) ratio and number of graduates. Skilled & Technical Sciences leadership recommends continuation of the program.

- I. Program: **Welding Technology (WELD)**
- II. College Mission: Central Community College maximizes student and community success.
- III. College Vision: The Best Choice –

for students to achieve their educational goals.
 - quality education
 - personal service and individualized attention
 - exceptional and passionate faculty and staff
 - extraordinary value
for developing a skilled workforce.
 - employability and/or successful credit transfers
 - graduates who advocate for CCC
 - business and industry partnerships
 - state-of-the-art facilities and technologies
for advancing communities.
 - educational partnerships
 - strong alumni support
 - foster economic development
 - sustainability leaders

EMSI Q4 2021 Data Set

EMSI data is a hybrid dataset derived from official government sources such as the US Census Bureau, Bureau of Economic Analysis, and Bureau of Labor Statistics.

Leveraging the unique strengths of each source, our data modeling team creates an authoritative dataset that captures more than 99% of all workers in the United States.

This core offering is then enriched with data from online social profiles, resumes, and job postings to give you a complete view of the workforce.

Report Parameters

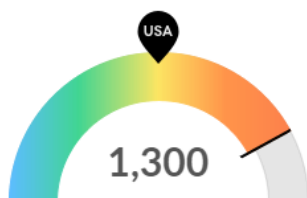
2 Occupations

51-4121 Welders, Cutters, Solderers, and Brazers

51-4122 Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders

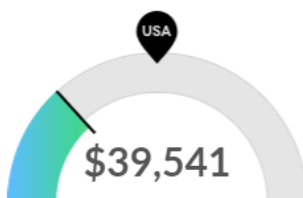
Executive Summary

Aggressive Job Posting Demand Over a Deep Supply of Regional Jobs



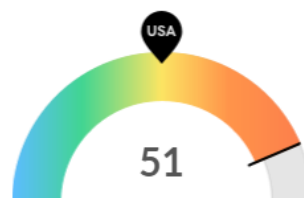
Jobs (2021)

Your area is a hotspot for this kind of job. The national average for an area this size is 489* employees, while there are 1,300 here.



Compensation

Earnings are low in your area. The national median salary for your occupations is \$43,611, compared to \$39,541 here.



Job Posting Demand

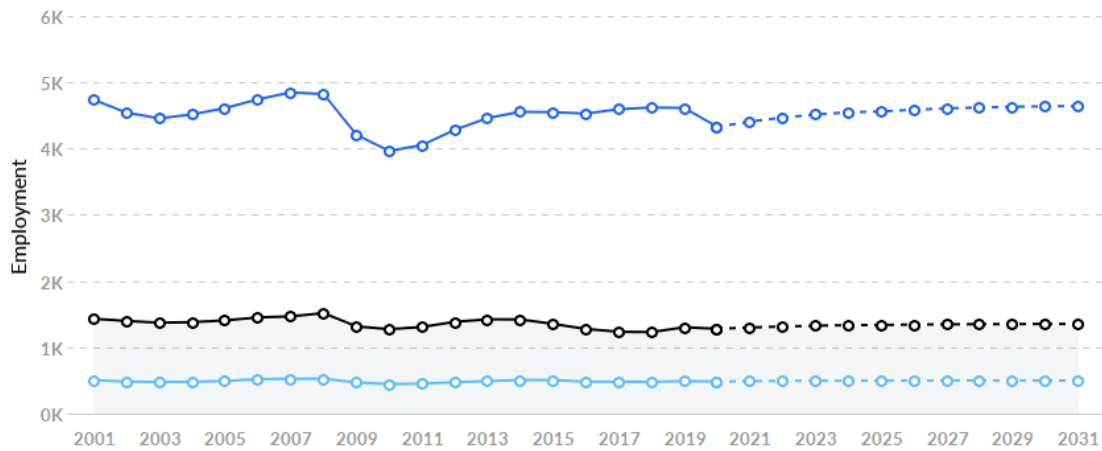
Job posting activity is high in your area. The national average for an area this size is 17* job postings/mo, while there are 51 here.

*National average values are derived by taking the national value for your occupations and scaling it down to account for the difference in overall workforce size between the nation and your area. In other words, the values represent the national average adjusted for region size.

Jobs

Regional Employment Is Higher Than the National Average

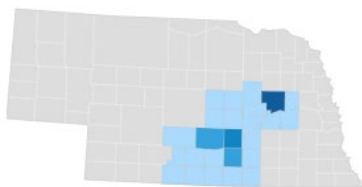
An average area of this size typically has 489* jobs, while there are 1,300 here. This higher than average supply of jobs may make it easier for workers in this field to find employment in your area.



Region	2021 Jobs	2026 Jobs	Change	% Change
● CCC Service Area	1,300	1,343	43	3.3%
● National Average	489	498	9	1.8%
● State of Nebraska	4,408	4,586	178	4.0%

*National average values are derived by taking the national value for your occupations and scaling it down to account for the difference in overall workforce size between the nation and your area. In other words, the values represent the national average adjusted for region size.

Regional Breakdown



County	2021 Jobs
Platte County, NE	461
Hall County, NE	312
Buffalo County, NE	160
Adams County, NE	157
Butler County, NE	46

Most Jobs are Found in the Architectural and Structural Metals Manufacturing Industry Sector

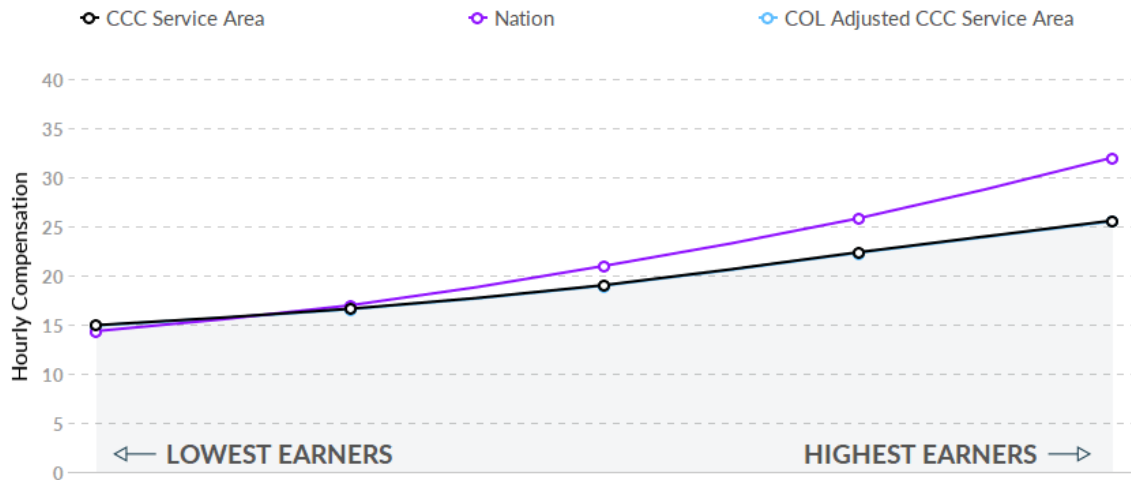


Industry	% of Occupation in Industry (2021)
Architectural and Structural Metals Manufacturing	25.9%
Agriculture, Construction, and Mining Machinery Manufacturing	14.8%
Motor Vehicle Parts Manufacturing	8.4%
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	7.8%
Other General Purpose Machinery Manufacturing	6.6%
Other Fabricated Metal Product Manufacturing	5.8%
Other	30.7%

Compensation

Regional Compensation Is 9% Lower Than National Compensation

For your occupations, the 2020 median wage in your area is \$19.01/hr, while the national median wage is \$20.97/hr.



Job Posting Activity



243 Unique Job Postings

The number of unique postings for this job from Jan 2021 to Nov 2021.



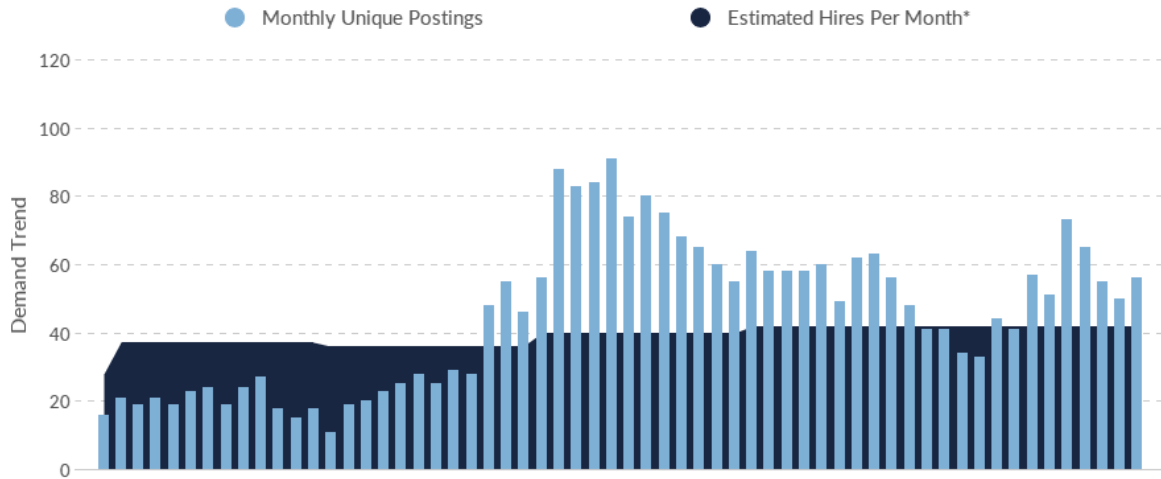
57 Employers Competing

All employers in the region who posted for this job from Jan 2021 to Nov 2021.



31 Day Median Duration

Posting duration is 2 days longer than what's typical in the region.



Occupation	Avg Monthly Postings (Jan 2021 - Nov 2021)	Avg Monthly Hires (Jan 2021 - Nov 2021)
Welders, Cutters, Solderers, and Brazers	49	41
Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	2	1

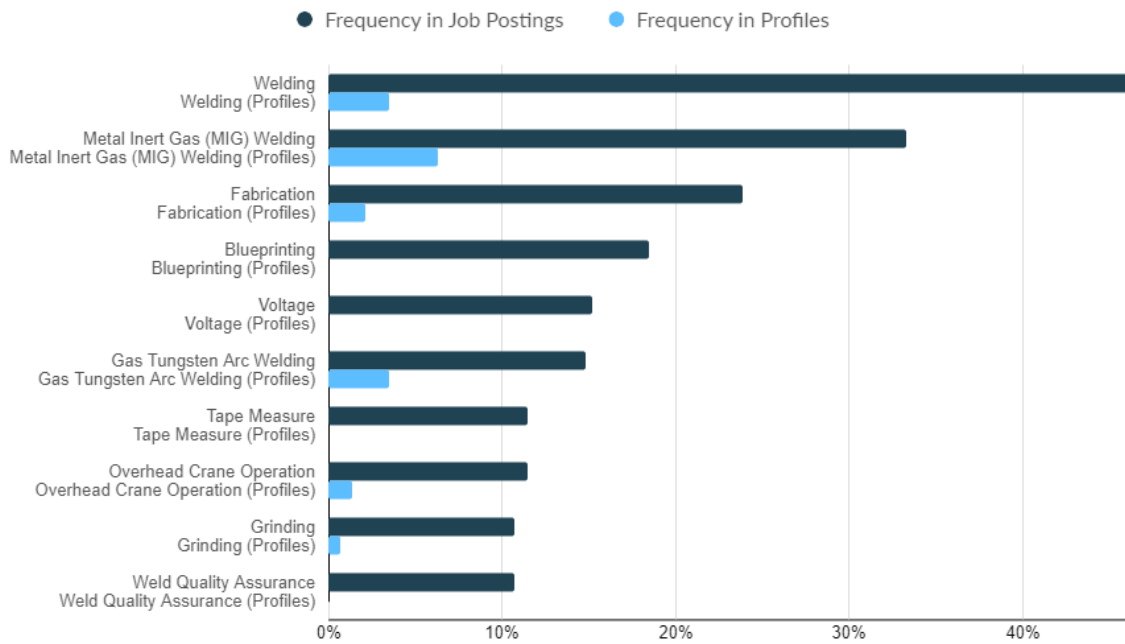
*A hire is reported by the Quarterly Workforce Indicators when an individual's Social Security Number appears on a company's payroll and was not there the quarter before. Emsi hires are calculated using a combination of Emsi jobs data, information on separation rates from the Bureau of Labor Statistics (BLS), and industry-based hires data from the Census Bureau.

Top Companies	Unique Postings
ASSOCIATED STAFFING	44 
Essential Personnel	34 
CNH Industrial	13 
Valmont Industries	8 
Werner Construction	7 
Chief Industries	6 
Appalachian Railcar Services, I	5 
Jobline	5 
Jobs2Web USA	5 
Valmont	4 

Top Job Titles	Unique Postings
Welders	107 
MIG Welders	19 
Lead Shift Managers	13 
Welders/Fabricators	10 
1st Grade Teachers	8 
Laser Operators	8 
Welder Apprentices	8 
Lead Fabricators	6 
Aluminum Welders	5 
Fitters/Welders	5 

Top Hard Skills

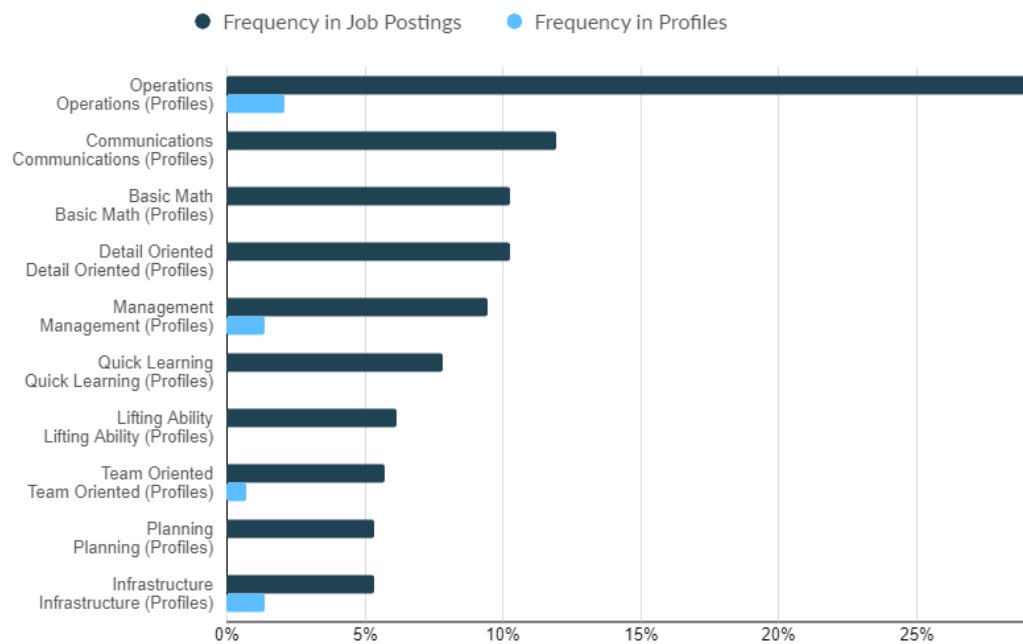
Top Hard Skills



Skills	Postings	% of Total Postings	Profiles	% of Total Profiles
Welding	113	47%	5	3%
Metal Inert Gas (MIG) Welding	81	33%	9	6%
Fabrication	58	24%	3	2%
Blueprinting	45	19%	0	0%
Voltage	37	15%	0	0%
Gas Tungsten Arc Welding	36	15%	5	3%
Tape Measure	28	12%	0	0%
Overhead Crane Operation	28	12%	2	1%
Grinding	26	11%	1	1%
Weld Quality Assurance	26	11%	0	0%

Top Common Skills

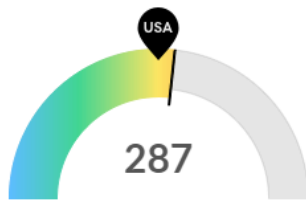
Top Common Skills



Skills	Postings	% of Total Postings	Profiles	% of Total Profiles
Operations	71	29%	3	2%
Communications	29	12%	0	0%
Basic Math	25	10%	0	0%
Detail Oriented	25	10%	0	0%
Management	23	9%	2	1%
Quick Learning	19	8%	0	0%
Lifting Ability	15	6%	0	0%
Team Oriented	14	6%	1	1%
Planning	13	5%	0	0%
Infrastructure	13	5%	2	1%

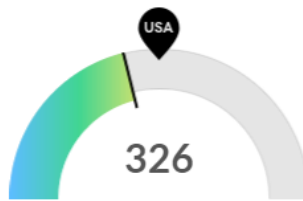
Demographics

Retirement Risk Is High, While Overall Diversity Is About Average



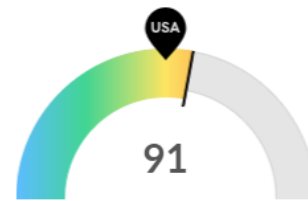
Retiring Soon

Retirement risk is high in your area. The national average for an area this size is 260* employees 55 or older, while there are 287 here.



Racial Diversity

Racial diversity is low in your area. The national average for an area this size is 411* racially diverse employees, while there are 326 here.



Gender Diversity

Gender diversity is high in your area. The national average for an area this size is 77* female employees, while there are 91 here.

*National average values are derived by taking the national value for your occupations and scaling it down to account for the difference in overall workforce size between the nation and your area. In other words, the values represent the national average adjusted for region size.

Occupation Age Breakdown

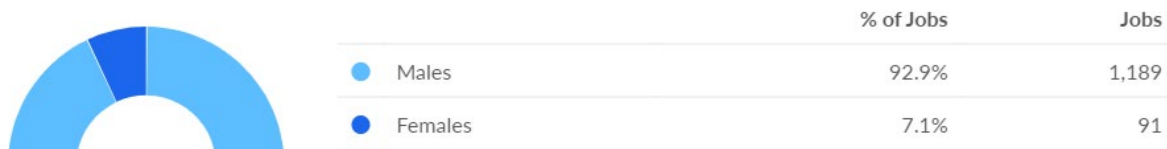


	% of Jobs	Jobs
14-18	0.9%	11
19-24	9.3%	119
25-34	24.5%	313
35-44	23.5%	301
45-54	19.3%	247
55-64	17.1%	219
65+	5.3%	68

Occupation Race/Ethnicity Breakdown



Occupation Gender Breakdown



Graduate Pipeline



1 Program

Of the programs that can train for this job, 1 has produced completions in the last 5 years.



136 Completions (2020)

The completions from all regional institutions for all degree types.



160 Openings (2020)

The average number of openings for an occupation in the region is 28.

CIP Code	Top Programs	Completions (2020)
48.0508	Welding Technology/Welder	136

Top Schools	Completions (2020)
Central Community College	136

2022 Summary of EMSI Data:

The Welding Technology program at Central Community College continues to be a highly needed program. Highly skilled Welders are needed by industry; area industry is short on Welders and continue to look to the Central Community College Welding program for help. As labor shortages continue, industry is seeking all options to build a skilled workforce.

As noted in the EMSI data, the projected need for welders in our service-area and the state of Nebraska are higher than the national average. This might be expected since Nebraska is a manufacturing state, along with heavy agriculture production. It might also be noted that the annual median salary for this area is lower than the national average and something employers may need to consider along with the low unemployment rates. These factors make the need for the CCC Welding program even more important in attracting students and developing graduates.

Enrollment for adult students continues to grow on all three campuses. The Central Community College Welding program is at or near capacity on all three campuses. Enrollment in the high school Career Pathways program is up from last year. As we learn to manage the pandemic, Career Pathways enrollment is expected to increase to a maximum of 15 students per class for a total of 60 Career Pathways students.

Local manufacturing and the economy as a whole remain strong. There continues to be a lack of employees for skilled labor positions. Area industry has a high demand for skilled Welders with specific skills sets and knowledge of specific welding equipment. Due to different products being produced, welding equipment requirements vary by company. Opportunities for students are bountiful. An AAS Degree can help students and employees to advance in their choice of careers.

Job openings are available as industry has labor shortages and continued growth. Opportunities are available for students with higher education. The number of Central Community College graduates who have earned Certificates, Diplomas, and Degrees continues to grow. Knowledge of specific skill sets and equipment is desired.

Central Community College puts great emphasis on relationships with Industry. In return, Central Community College is greatly supported by Industry. Communication with industry through Advisory Committees continues to be very important. These communications allow industry to give us insight on needed skills and new equipment being used.

Central Community College continues to build relationships between students and employers through programs such as apprenticeships. This allows students to work while attending classes. It also helps employers retain employees and help them attain the skills needed to become successful.

A. Supporting Data

a. Awards

Degree/ Credential Awarded	16-17	17-18	18-19	19-20	20-21	5-yr avg
AAS	27	19	13	19	28	21.2
Diploma	23	18	17	27	36	24.2
Certificate	79	92	93	90	132	97.2
Total Awards	129	129	123	136	196	142.6
# of unduplicated graduates	86	80	78	83	104	86.2

2022 Summary of Awards:

The 2020-2021 academic year saw very large increases in awards for degrees, diplomas, and certificates. The 2020-2021 academic year saw records of 196 total awards and the five-year average is at 142.6. Welding awards will grow as enrollment grows. Industry shows no signs of deceleration and open Welding positions are expected to rise.

b. Student Credit Hours per Faculty FTE

	16-17	17-18	18-19	19-20	20-21	5 yr avg
Student Credit Hours (SCH)	2,698	2,128	2,194	2,831	2,872	2,544.60
Faculty Full-time Equivalency (FTE)	8.39	7.39	7.69	7.70	7.55	7.74
SCH/Faculty FTE	321.57	287.96	285.31	367.66	380.58	328.69

2022 Summary of the Student Credit Hours per Faculty FTE:

Since 2019-2020, student credit hours have increased significantly from previous years bringing the five-year average up over 2,500 student credit hours. The 2020-2021 school year was also above its 5-year average over 2,500. A third full-time instructor in Grand Island has helped accommodate enrollment growth in Grand Island, which supports a number of early college students in the Welding pathway program. The program continues to maintain success through programs at three locations, eight full-time faculty as of fall 2021, and one part-time evening instructor in Grand Island. The program has been adding more modern welding equipment being used in industry and with the facility remodel in Hastings, all three locations have all had fairly recent updates.

2022 Summary Statement:

As industry continues to surge, so does the value of skilled Welders. Central Community College continues to improve its welding labs and equipment to meet industry needs. Central Community College also continues to invest in employees with the addition of a new Welding Instructor in Grand Island. These investments will provide a better learning experience for students. In addition, this will help meet the needs of industry and the community as a whole.

Due to COVID impacts and a shortage of workers, there is a greater need for skilled workers with a higher education and skill level. Employers are working to attract and retain welders with increased wages and greater emphasis on relationships with Central Community College.

Central Community College has proven to be a great resource for employers and students. Much work has been done to make students aware that Welding and skilled labor can be a great and rewarding career.

The Welding program at CCC continues to be a popular program that students are successful in. The program exceeds thresholds for student credit hours relative to the number of full-time equivalent faculty, as well as number of graduates from the program earning an AAS degree, diploma, and certificates.