

Coordinating Commission for Postsecondary Education Review of Existing Instructional Programs

Institution: Central Community College **Program:** Quality 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 18, 2023**
- the governing board's action was:

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

Evidence of Demand and Efficiency

		17-18	18-19	19-20	20-21	21-22	5 yr avg
Student Credit Hours (SCH)		159	189	201	162	75	157.2
Faculty Full-time Equivalency (FTEF)*		.93	1.14	1.21	.90	.30	.90
SCH/Faculty FTE		170.96	165.79	166.12	180.00	250.00	174.67
Number of Degrees and Awards <i>(list degrees/awards separately)</i>	AAS	2	1	3	0	1	1.4
	Diploma	2	1	4	3	2	2.4
	Certificate	4	7	9	9	5	6.8
	Total Awards	8	9	16	12	8	10.6
	# of Unduplicated Graduates	3	6	6	6	6	5.4

**By term analysis combined to conduct an annual review. Numbers reported reflect 2 different negotiated contract periods (FA17-SU20 and FA20-SU22)*

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

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).

The Quality Technology Program is critical to Central Community College’s mission of maximizing community and student success through developing quality technicians who use a variety of scientific processes to guarantee the quality of the products are manufactured. The program is designed to meet the needs of both students and industry in manufacturing and manufacturing-related fields like welding, electrical, and mechanical fields that require high quality standards to be met. Central has just hired a full-time quality instructor to begin in Fall 2023 after searching for 2 years to fill the position. The quality instructor role at Central has been filled by part-time faculty and/or qualified full-time faculty from other disciplines who are teaching in overload. Recruiting in the program has been very limited. Most of the students in the program are already in the workforce and are working full-time. These students are in a quality related position or have identified quality as an opportunity to excel in their workplace and are seeking to improve their skillset. Because these students are working full-time, the students are enrolled at Central on a part-time basis and Central has developed a plan for students to complete the quality program 6 credits per semester. This results in lower completion rates as found in the data. Central continues to be committed to our Quality Technology program.

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).



Quality Technology

Coordinating Commission Seven-Year Review 2023

Information in this report reviewed and recommended to cabinet:

Central Community College Educational Services, 4/27/2023

Recommended continuation of programs without monitoring:

Central Community College College Cabinet, 05/4/2023
Central Community College Board of Governors, 05/18/2023-pending

Doug Holt – Program Faculty
Rhett Psota – Program Faculty

Alison Feeney, M.A.E. – Associate Dean of Instruction, Career & Technical Sciences
Brian Hoffman, M.A. – Associate Dean of Instruction, Career & Technical Sciences
John McKinney, M.Div. – Associate Dean of Instruction, Career & Technical Sciences

Nate Allen, Ed.D. – Dean of Instruction, Career & Technical Sciences
Chris Waddle, J.D. – Division Vice President, Career & Technical Sciences

Quality Technology

Program Review Summary – Dr. Nate Allen

The Quality Technology (QUCT) program is one of twenty programs within the Career and Technical Sciences division at Central Community College (CCC), serving industry with one instructor at the Grand Island campus by providing adaptable and flexible online courses for the varied quality systems educational needs of stakeholders throughout the region.

Economic Modeling Specialist International (EMSI) data suggests the industry needs for quality technicians is growing and will continue to grow within the CCC service area, the state of Nebraska, and nationally.

The program has seen steady growth in the number of graduates who, in turn, are employed in the Quality Technology field. Many students have a plan of employment when they enter the program. Many students are already employed in the field and are reaching for a degree to help with promotions.

QUCT student course completion reached a high of 88% compared to the five-year average of 74.6%. This shows that the students taking Quality Technology courses are very successful in completing their courses due to a variety of factors: students tend to be working adults with current work experience in quality control, companies giving incentives to complete the degree or by giving tuition assistance for successful completion of a course, and smaller classes that allow more interaction between students and faculty.

The QUCT program continues to provide a ladder structure of program awards with four certificates, one diploma, and an associate of applied science (AAS) degree. The online instructional format makes this program very appealing to nontraditional students. Employers of quality workers are supportive of them continuing their education by offering tuition reimbursement for employees to be part-time students.

Of the QUCT graduate students surveyed, in the 2021-22 Graduate Survey, all perceived that their perception of preparation received by their education at Central Community College was advanced.

Based on the number of jobs needing to be filled in our 25-county service-area, the number of workers desiring to get additional training in their field, the format of the QUCT program delivery, the number of continued awards earned, and the impact our QUCT program has on our businesses and communities, Career and Technical Sciences leadership recommends continuation of the program.

I. **Program:** **Quality Technology (QUCT)**

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

IV. **Program Mission Statement:** The Quality Technology Program strives to maximize student and industry success.

V. **Program Vision Statement:** Central Community College's Quality Technology program will be recognized as a leader in creating a new culture of manufacturing and industry education that is responsive to the technological changes of the businesses we serve by providing adaptable and flexible courses, workshops, and seminars to meet the varied quality systems training needs of the stakeholders throughout the region. Four strategies will guide the program vision:

- Create a technical education that is flexible to the needs of business and industry
- Establish improved technical curricula and learning environments
- Attract and retain a more diverse student body that represents education, industry and business
- Graduate Quality Technicians who possess those transforming skills that fully reflect business needs.

EMSI Q4 2022 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

4 Occupations

Industrial Production Managers (11-3051)

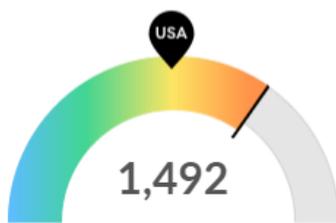
Calibration Technologists and Technicians (17-3028)

Engineering Technologists and Technicians, Except Drafters, All Other (17-3029)

Inspectors, Testers, Sorters, Samplers, and Weighers (51-9061)

Executive Summary

Light Job Posting Demand Over a Deep Supply of Regional Jobs



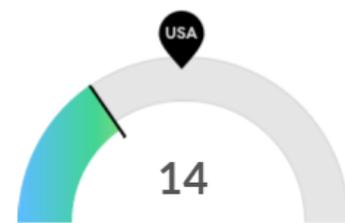
Jobs (2022)

Your area is a hotspot for this kind of job. The national average for an area this size is 872* employees, while there are 1,492 here.



Compensation

Earnings are about average in your area. The national median salary for your occupations is \$47,316, compared to \$46,977 here.



Job Posting Demand

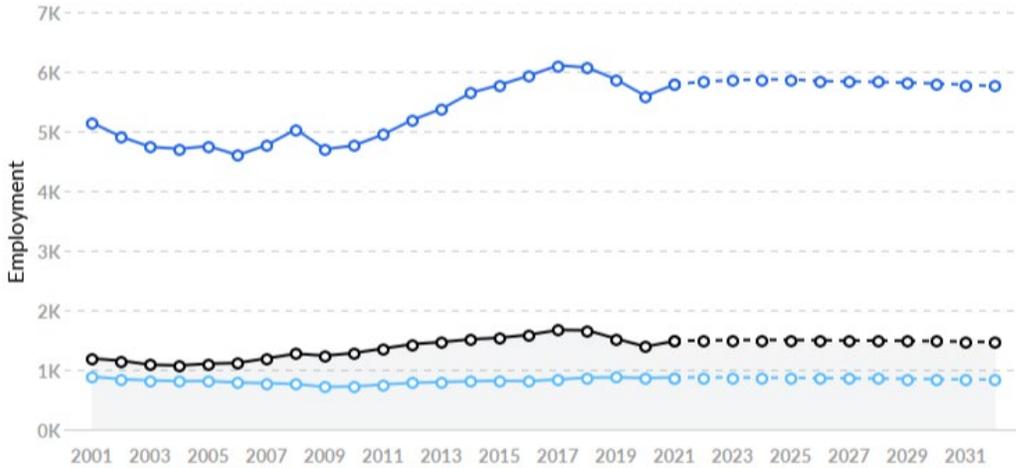
Job posting activity is low in your area. The national average for an area this size is 26* job postings/mo, while there are 14 here.

*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

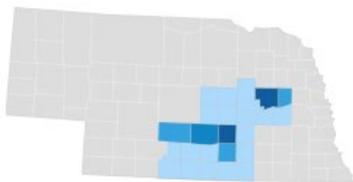
An average area of this size typically has 872* jobs, while there are 1,492 here. This higher than average supply of jobs may make it easier for workers in this field to find employment in your area.



Region	2022 Jobs	2027 Jobs	Change	% Change
● CCC Service Area	1,492	1,491	-2	-0.1%
● National Average	872	855	-17	-1.9%
● Nebraska	5,833	5,835	2	0.0%

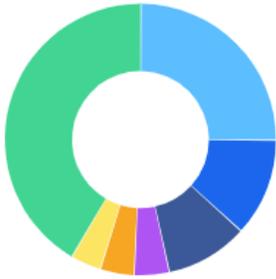
*National average values are derived by taking the national value for your occupations and scaling it down to account for the difference in overall workforce size between the nation and your area. In other words, the values represent the national average adjusted for region size.

Regional Breakdown



County	2022 Jobs
Platte County, NE	379
Hall County, NE	320
Buffalo County, NE	229
Dawson County, NE	155
Adams County, NE	138

Most Jobs are Found in the Animal Slaughtering and Processing Industry Sector

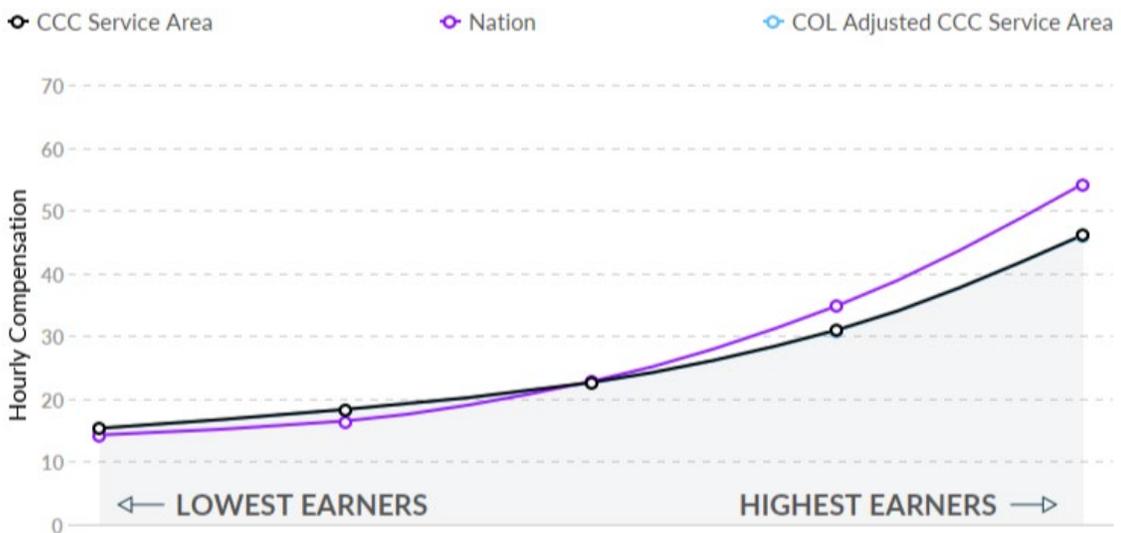


Industry	% of Occupation in Industry (2022)
Animal Slaughtering and Processing	25.0%
Medical Equipment and Supplies Manufacturing	11.7%
Motor Vehicle Parts Manufacturing	9.8%
Other Fabricated Metal Product Manufacturing	4.2%
Agriculture, Construction, and Mining Machinery Manufacturing	4.0%
Plastics Product Manufacturing	3.7%
Other	41.6%

Compensation

Regional Compensation Is the Same Cost as the Nation

For your occupations, the 2021 median wage in your area is \$22.59/hr, while the national median wage is \$22.75/hr.



Job Posting Activity



167 Unique Job Postings

The number of unique postings for this job from Jan 2022 to Dec 2022.



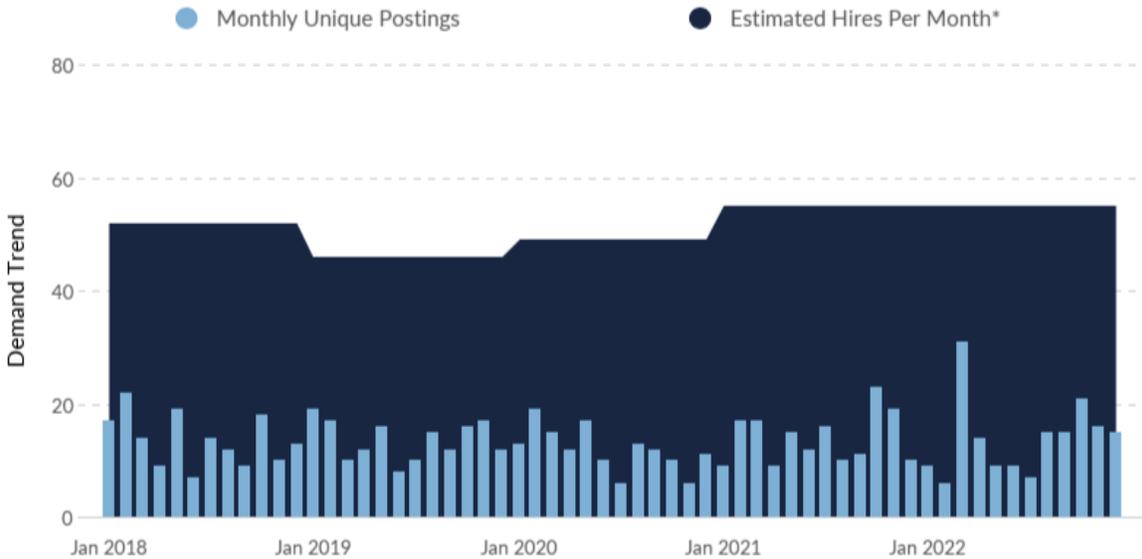
60 Employers Competing

All employers in the region who posted for this job from Jan 2022 to Dec 2022.



38 Day Median Duration

Posting duration is 11 days longer than what's typical in the region.



Occupation	Avg Monthly Postings (Jan 2022 - Dec 2022)	Avg Monthly Hires (Jan 2022 - Dec 2022)
Industrial Production Managers	7	8
Inspectors, Testers, Sorters, Samplers, and Weighers	6	44
Engineering Technologists and Technicians, Except Drafters, All Other	1	2

*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. Lightcast hires are calculated using a combination of Lightcast 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
McCain Foods	12
Vishay Intertechnology	11
BD	9
Parker Meggitt	8
Lindsay Corporation	7
Mosaic	6
American Foods Group	5
Alamon	4
Grifols	4
Overhead Door Corporatio	4

Top Job Titles	Unique Postings
Quality Managers	13
Quality Technicians	10
Quality Assurance Manager	9
Quality Inspectors	8
Production Managers	6
Samplers	6
Value Stream Managers	6
Engineering Technicians	5
Construction Quality Mana	4
Industrial Managers	4

Top Specialized Skills

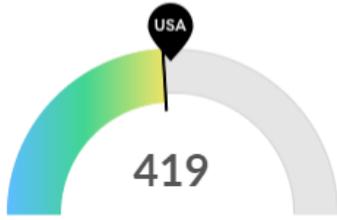
Top Specialized Skills



Skills	Postings	% of Total Postings	Profiles	% of Total Profiles
Auditing	59	35%	19	4%
Quality Management	35	21%	55	11%
Continuous Improvement Process	32	19%	75	15%
Good Manufacturing Practices	30	18%	12	2%
Quality Management Systems	28	17%	32	6%
Food Safety And Sanitation	27	16%	16	3%
Supply And Demand	25	15%	0	0%
Statistical Process Controls	24	14%	15	3%
Data Analysis	22	13%	5	1%
Lean Manufacturing	22	13%	72	14%

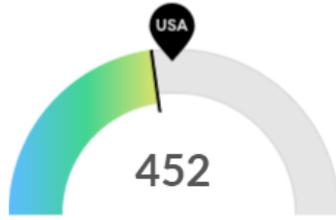
Demographics

Retirement Risk Is About Average, While Overall Diversity Is About Average



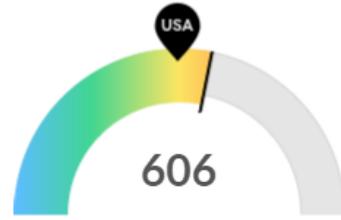
Retiring Soon

Retirement risk is about average in your area. The national average for an area this size is 443* employees 55 or older, while there are 419 here.



Racial Diversity

Racial diversity is low in your area. The national average for an area this size is 514* racially diverse employees, while there are 452 here.



Gender Diversity

Gender diversity is high in your area. The national average for an area this size is 507* female employees, while there are 606 here.

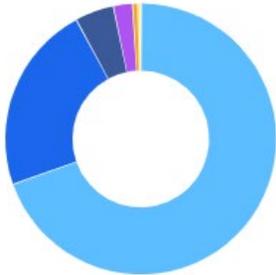
*National average values are derived by taking the national value for your occupations and scaling it down to account for the difference in overall workforce size between the nation and your area. In other words, the values represent the national average adjusted for region size.

Occupation Age Breakdown



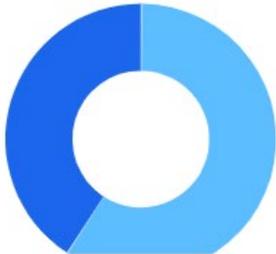
	% of Jobs	Jobs
14-18	0.2%	4
19-24	5.6%	84
25-34	19.1%	283
35-44	22.8%	338
45-54	23.9%	353
55-64	23.2%	343
65+	5.1%	76

Occupation Race/Ethnicity Breakdown



	% of Jobs	Jobs
White	69.5%	1,029
Hispanic or Latino	22.5%	334
Black or African American	4.6%	69
Asian	2.3%	34
Two or More Races	0.6%	9
American Indian or Alaska Native	0.3%	5
Native Hawaiian or Other Pacific Islander	0.1%	2

Occupation Gender Breakdown



	% of Jobs	Jobs
Males	59.0%	874
Females	41.0%	606

Graduate Pipeline



6 Programs

Of the programs that can train for this job, 6 have produced completions in the last 5 years.



191 Completions (2021)

The completions from all regional institutions for all degree types.



167 Openings (2021)

The average number of openings for an occupation in the region is 27.

Top Schools	Completions (2021)
Central Community College	141 
University of Nebraska at Kearney	43 
Hastings College	7 

CIP Code	Top Programs	Completions (2021)
47.0303	Industrial Mechanics and Maintenance Technology/Technician	123 
52.0205	Operations Management and Supervision	43 
15.0702	Quality Control Technology/Technician	12 
52.0101	Business/Commerce, General	7 
15.1701	Energy Systems Technology/Technician	6 

2023 Summary of EMSI Q4 2022 Data Set:

While there are available jobs in our area some positions have been lost over recent years. Our CCC service area has seen a flat job growth rate and the national rate is down just under 2%. The average hourly rate of \$22.59/hr. is only slightly lower in the CCC service area versus National average of \$22.75/hr. Advertisements of job openings for QUCT related activities accounted for 167 unique job postings from 60 competing employers. The most desired skills for students in this field includes Auditing, Quality Management, Continuous Improvement Process, Good Manufacturing Practices, Quality Management Systems, Food Safety And Sanitation, Supply and Demand, Statistical Process Controls, Data Analysis, and Lean Manufacturing. The report indicates a good diversity with 31% versus National Average of 25%. Also Gender Diversity is well balanced with 41% female and 59% male mix. Graduates of CCC represent 74% of all awards generated in the CCC Service Area are generated at CCC (other colleges: Hastings College, University of Nebraska Kearney).

A. Supporting Data

a. Awards

Degree/ Credential Awarded	17-18	18-19	19-20	20-21	21-22	5-yr avg
AAS	2	1	3	-	1	1.4
Diploma	2	1	4	3	2	2.4
Certificate	4	7	9	9	5	6.8
Total Awards	8	9	16	12	8	10.6
# of Graduates	3	6	6	6	6	5.4

2023 Summary of Awards (2021-22 data):

The total number of awards given in the 2021-22 time period was down from the previous year from 12 to 8 and was a little under the 5-year average of 10.6. However, 6 students graduated from the program, 1 with a AAS degree, and the overall average was still slightly above the 5-year average of graduates at 5.4.

b. Student Credit Hours Produced per Faculty FTE

	17-18	18-19	19-20	20-21	21-22	5 yr avg*
Student Credit Hours (SCH)	159	189	201	162	75	157.20
Faculty Full-time Equivalency (FTE)	0.93	1.14	1.21	0.90	.30	.90
SCH/Faculty FTE	170.96	165.79	166.12	180.00	250.00	174.67

Source: Program Stats by Alpha and Instructor-Student FTE reports.

*By term analysis combined to conduct an annual review. Numbers reported reflect 2 different negotiated contract periods (FA17-SU20 and FA20-SU22)

2023 Summary of the Student Credit Hours per Faculty FTE (2021-22 data):

The number of student credit hours in the QUCT program declined from a total of 162 in 2021 to a total of 75 in 2022, this was about half of the 5 year average of 157.20 credit hours. As a result, Faculty Full-time Equivalency (FTE) was only .30 for this year comparing to .90 for the 5-year average.

2023 Summary Statement:

The Quality program has three primary needs. First, to continue updates in the curriculum so that student resource materials stay current, as well as promotional items for trade shows. Second, Professional development of faculty have potential positive impacts in all current goals from recruitment, student success and curriculum relevancy. And third, increase program enrollments, graduations rates, and awards.