

The Economic Benefits of Scioto County Career Technical Center

SCIOTO COUNTY
CAREER TECHNICAL CENTER



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ECONOMICS CENTER
RESEARCH AND CONSULTING

ABOUT

Career technical education prepares students for certificates, industry-recognized certifications, and state licensures to obtain employment in a variety of careers such as nursing, public safety, welding, and industrial maintenance. The Scioto County Career Technical Center provides career technical education to public high school students as well as adult students and high school graduates. This study explores the economic and fiscal benefits generated by the operations and capital expenditures of the Scioto County Career Technical Center and the benefits of career technical education for its adult students.

- During the 2019-20 academic year, a total of **108** adult students were enrolled in career technical education.¹
- Of adult students enrolled, more than three-fourths (**76.9%**) were female.
- A total of **209** career technical certificates were awarded to adult students during the 2019-20 academic year.
- Approximately **77.0** percent of the certificates awarded were in health professions or related clinical sciences programs.



108
ADULT STUDENTS



76.9%
WERE FEMALE



209
AWARDED CERTIFICATES



77.0%
HEALTH PROGRAMS

Career Technical Program Completions, AY 2019-20

Program	Length of Program (Hours)	Cost of Program	Total Completions
Practical Nursing	1,350	\$12,976	60
Nurse Aide	76	\$763	40
Surgical Technology	1,200	\$10,953	17
Pharmacy Technician	600	\$5,481	14
Police Academy	747	\$6,663	13
Medical Assisting	900	\$8,417	12
Phlebotomy	176	\$1,651	10
Dental Assisting	900	\$7,240	8
Power Line Mechanic	900	\$11,996	8
Welding	600	\$5,681	7
Industrial/Constructional Electricity	1,200	\$9,693	7
Firefighter	120	\$991	5
Industrial Maintenance	1,200	\$10,946	4
Information Technology	900	\$9,595	4
Total	N/A	N/A	209

¹ Data on enrollment during the 2019-20 academic years were obtained from the Integrated Postsecondary Education Data System (IPEDS) of the U.S. Department of Education.

ECONOMIC IMPACT

To provide career technical education, the Scioto County Career Technical Center incurs expenses related to operations and capital projects. Operations expenditures represent the day-to-day expenses such as the salaries paid to provide instructional and support services, supply purchases, and other services, among other things. The Scioto County Career Technical Center also incurs expenses related to capital projects such as building expansion, equipment, or information technology upgrades. These expenditures are associated with a specific project and are generally a one-time expenditure, as opposed to ongoing.

The expenditures made by the Scioto County Career Technical Center on operations and capital generate economic activity in Scioto County. These expenditures in turn stimulate additional economic activity for the businesses and industries that provide goods and services to the Scioto County Career Technical Center. The direct impact is the amount spent directly by the Scioto County Career Technical Center that was retained in Scioto County after accounting for economic leakage. Economic leakage refers to the percentage of demand for products and services that cannot be met immediately within the local economy, and thus must be imported from outside the local economy. The indirect impact is the additional impact resulting from the inter-industry linkages. Direct impacts also have ripple effects known as induced impacts as a result of the increases in household income and spending. Induced impacts are reported within indirect impacts.

Economic Impact of Operations Expenditures on Scioto County, FY 2020 (2021\$)

Economic Output

\$9,806,405

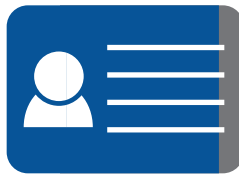


DIRECT
\$7,755,306

INDIRECT
\$2,051,099

Jobs

175



DIRECT
158

INDIRECT
17

Earnings

\$7,458,864



DIRECT
\$6,577,027

INDIRECT
\$881,837

Economic Impact of Capital Expenditures on Scioto County, Annual Average FY 2016-2020² (2021\$)

Economic Output

\$530,568

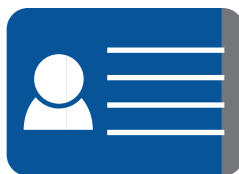


DIRECT
\$418,683

INDIRECT
\$111,885

Jobs

41



DIRECT
37

INDIRECT
4

Earnings

\$1,371,650



DIRECT
\$1,201,651

INDIRECT
\$169,999

² Because capital expenditures can vary drastically from year to year, a five-year average was used to approximate the average annual capital expenditures.

EARNINGS

The economic benefit of completing a career technical certificate is represented by the potential earnings associated with full-time employment in a related occupation. The projected earnings for each certificate program were compared to the baseline earnings for individuals with a high school diploma or equivalent. The difference in earnings represents the additional earnings potential resulting from specialized training and continued related employment for a certificate holder from each program.

On average, career technical certificate holders are estimated to have annual earnings of **\$42,821** five years after starting the program. This represents a potential earnings gain of \$8,406 compared to the annual earnings of high school graduates. Average annual earnings for certificate holders are projected to increase to **\$47,300** after 10 years, or approximately \$8,715 more than high school graduates. After 20 years, the average annual earnings of certificate holders are projected to increase to **\$57,799**, which represents a potential earnings gain of \$10,874 compared to high school graduates.

The certificate programs with the highest annual earnings after 20 years were power line mechanic (**\$97,822**), industrial/constructional electricity (**\$87,753**), police academy (**\$87,134**), industrial maintenance (**\$84,325**), and firefighter (**\$82,680**). These programs had estimated annual earnings that exceeded the high school baseline by more than \$35,000. The nurse aide and phlebotomy certificate programs have lower annual earnings compared to the high school baseline during each time period.



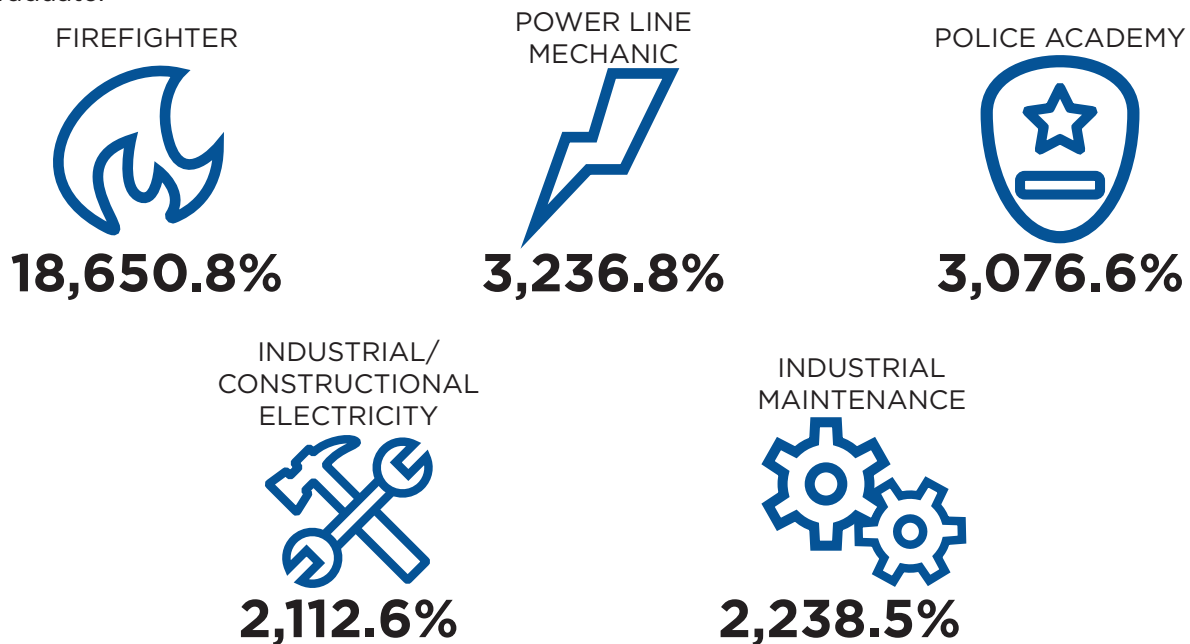
Annual Earnings by Program for Years 5, 10, and 20

Program	Year 5	Year 10	Year 20
Practical Nursing	\$44,247	\$48,075	\$56,752
Nurse Aide	\$29,511	\$32,675	\$40,056
Surgical Technology	\$42,346	\$46,705	\$56,816
Pharmacy Technician	\$36,714	\$41,880	\$54,494
Police Academy	\$58,493	\$66,788	\$87,134
Medical Assisting	\$38,144	\$43,498	\$56,567
Phlebotomy	\$28,355	\$30,253	\$34,441
Dental Assisting	\$36,467	\$41,140	\$52,361
Power Line Mechanic	\$74,484	\$81,562	\$97,822
Welding	\$41,173	\$44,544	\$52,137
Industrial/Constructional Electricity	\$64,129	\$71,157	\$87,753
Firefighter	\$56,857	\$64,369	\$82,680
Industrial Maintenance	\$68,914	\$73,709	\$84,325
Information Technology	\$48,538	\$53,253	\$64,119
Weighted Average	\$42,821	\$47,300	\$57,799
High School Baseline	\$34,415	\$38,585	\$46,925

RETURN ON INVESTMENT

Obtaining a career technical certificate has both explicit and implicit costs that are often incurred at the beginning of the program, while the benefits are not immediate. Therefore, obtaining a certificate is often considered an investment that delivers future returns in the form of additional earnings. The benefits refer to the increased earnings potential that results from attaining an additional certificate relative to individuals with a high school diploma or equivalent. The explicit costs include the cost of tuition, books, and fees as well as the implicit opportunity costs of pursuing a certificate. Opportunity costs refer to the earnings a student foregoes as a result of the decrease in hours worked in order to pursue career technical education.

The certificate programs with the highest return on investment after 20 years were firefighter **(18,650.8%)**, power line mechanic **(3,236.8%)**, police academy **(3,076.6%)**, industrial maintenance **(2,238.5%)**, and industrial/constructional electricity **(2,112.6%)**. Twelve of the 14 certificate programs have a positive return on investment after 20 years. This means that a graduate of each of these programs is expected to have earnings that recoup the cost of their career technical certificate and result in earnings above that of a high school graduate.



Return on Investment by Program for Years 5, 10, and 20

Program	Year 5	Year 10	Year 20
Practical Nursing	-49.1%	94.9%	381.4%
Nurse Aide	-1,352.4%	-2,800.8%	-6,235.8%
Surgical Technology	-62.6%	75.2%	382.5%
Pharmacy Technician	-127.5%	-29.8%	339.8%
Police Academy	423.7%	1,161.4%	3,076.6%
Medical Assisting	-121.2%	-21.6%	307.1%
Phlebotomy	-793.6%	-1,656.4%	-4,131.3%
Dental Assisting	-151.4%	-96.0%	92.1%
Power Line Mechanic	579.7%	1,396.0%	3,236.8%
Welding	42.9%	255.2%	625.0%
Industrial/Constructional Electricity	224.6%	788.7%	2,112.6%
Firefighter	3,284.8%	7,633.0%	18,650.8%
Industrial Maintenance	391.0%	990.7%	2,238.5%
Information Technology	102.9%	413.8%	1,099.3%

FISCAL IMPACT

Operations and Capital Expenditures

The operations and capital expenditures of the Scioto County Career Technical Center generate fiscal impacts for state and local governments in addition to the economic impacts generated. The fiscal impact includes the earnings tax revenue resulting from the earnings generated by operations and capital expenditures as well as the sales tax revenue resulting from the spending of those earnings. In total, the expenditures of the Scioto County Career Technical Center generated **\$246,815** in tax revenue for state and local governments in fiscal year 2020. Income tax revenue totaled **\$184,080**, while sales tax revenue totaled **\$62,735**. The fiscal impact of operations expenditures accounted for **84.3 percent** of the total fiscal impact. The fiscal impact of capital expenditures accounted for the remaining **15.7 percent** of the total fiscal impact.

Income Tax Revenue

\$184,080



OPERATIONS
\$157,902

CAPITAL
\$26,178

Sales Tax Revenue

\$62,735



OPERATIONS
\$50,080

CAPITAL
\$12,655

Total Tax Revenue

\$246,815



OPERATIONS
\$207,982

CAPITAL
\$38,833

Career Technical Education

The career technical education that adult education certificate holders receive leads to a higher earnings potential, on average, compared to individuals with at most a high school diploma or equivalent. The additional earnings potential generates fiscal impacts for state and local government through increased income and sales tax revenue. Collectively, adult education certificate holders during the 2019-20 academic year are estimated to generate an additional **\$1.5 million** in tax revenue over 20 years, or an average of **\$76,903** per year. The fiscal impact per certificate holder is **\$7,359** over 20 years, or approximately **\$368** per year.



SUMMARY

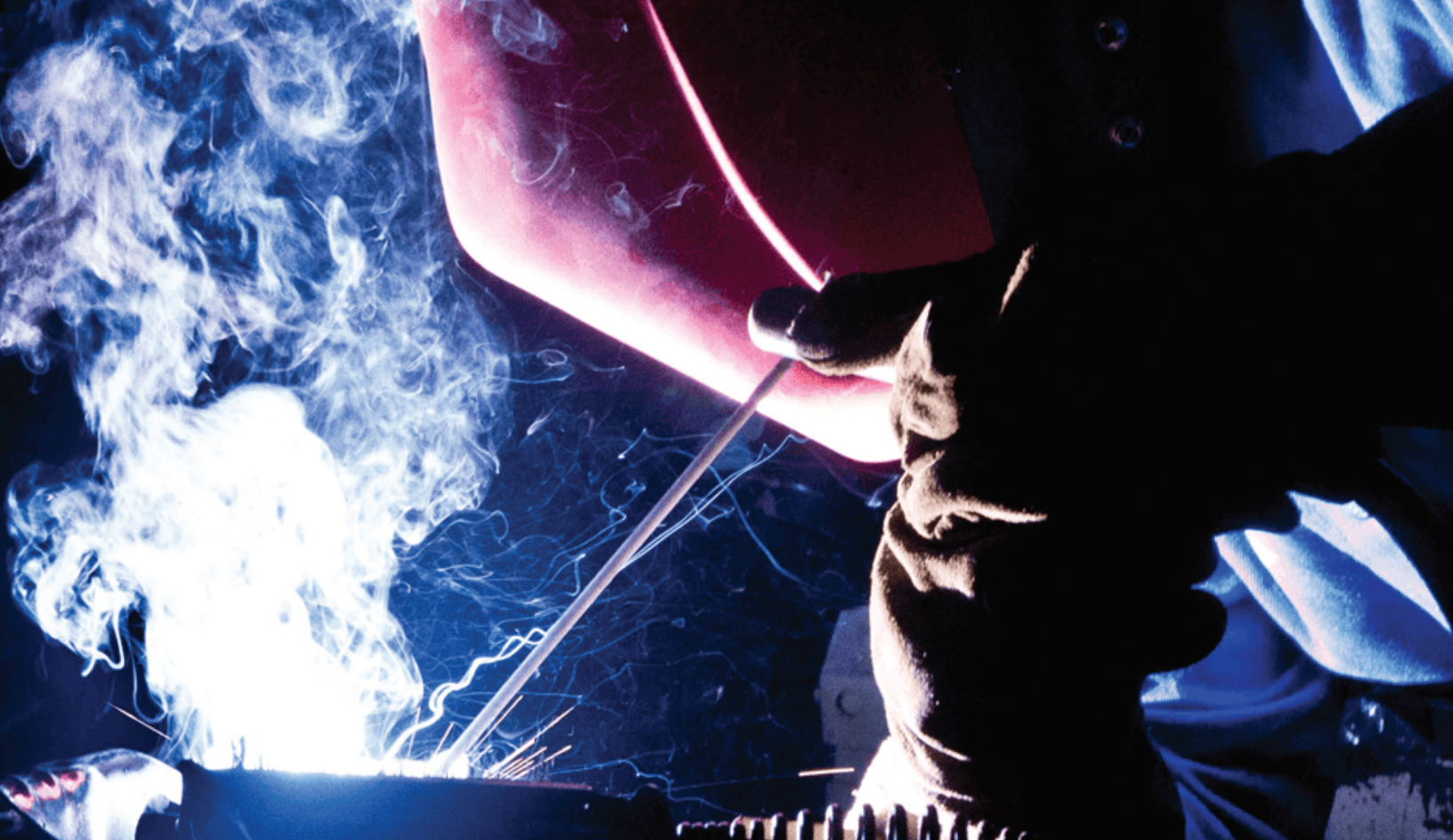
By providing career technical education and training, the Scioto County Career Technical Center generates economic benefits for Scioto County. The operations and capital expenditures of the Scioto County Career Technical Center generates economic activity, jobs, and earnings as well as generate income and sales tax revenue for state and local governments. The career technical education and training provided to adult students leads to additional earnings potential, on average, for certificate holders. The additional earnings potential also leads to fiscal impacts for state and local governments.

To provide career technical education, the Scioto County Career Technical Center pays employees and purchases supplies and services to support its day-to-day operating. It also makes purchases related to construction, renovation, and equipment. The expenditures made by Scioto County Career Technical Center on operations and capital generated substantial economic activity in Scioto County during fiscal year 2020. In total, capital and operations expenditures generated **\$10.3 million** in economic activity, supported **216 jobs**, and generated **\$8.8 million** in earnings. Additionally, the Scioto County Career Technical Center generated **\$246,815** in income and sales tax revenue during fiscal year 2020.

Career technical education also generates economic benefits by providing specialized training and education to individuals throughout the State of Ohio. After completion of a career technical certificate program, student are equipped for employment in a variety of industries. These certificate holders, who previously only had a high school diploma or equivalent, have the potential for an improved employment and earnings position. However, there are both explicit and implicit costs associated with obtaining a career technical certificate. The return on investment for each program compares the cumulative gain of each program with the costs of the program. The cumulative gain in a given year is the sum to date of the annual gains where the annual gain represents the annual difference between the baseline earnings for high school graduates and the estimated earnings for certificate holders after subtracting the costs incurred to complete the program.

On average, career technical certificate holders are estimated to have annual earnings of **\$42,821** five years after starting the program. This represents a potential annual earnings gain of \$8,406 compared to high school graduates. After 10 years, the average annual earnings are projected to increase to **\$47,300**, or approximately \$8,715 more than the high school baseline. The average annual earnings for certificate holders increases to **\$57,799** after 20 years, which represents a potential annual earnings gain of \$10,874 compared to high school graduates. The certificate programs with the highest return on investment after 20 years were firefighter (**18,650.8%**), power line mechanic (**3,236.8%**), police academy (**3,076.6%**), industrial maintenance (**2,238.5%**), and industrial/constructional electricity (**2,112.6%**).





For over forty years, the Scioto County Career Technical Center has served as the region's driving force for re-energizing the economy. Its mission is to provide a superior workforce through personalized training, new technologies, and community partnerships. The Scioto County Career Technical Center is accredited by the Commission of the Council on Occupational Education.



The Research and Consulting division of the Alpaugh Family Economics Center provides tools to help clients make better financial, policy, and economic and workforce development decisions. Our dynamic approach and critical data analyses empower business and civic leaders to respond to changing economic conditions, strengthen local economies, and improve the quality of life for their communities.