

WELDING ENGINEERING TECHNOLOGY, ADVANCED CERTIFICATE



College(s): DA

Program Code: 0450

This program is for students looking to work within the exciting field of Welding Engineering Technology. Students will learn welding skills including MIG, TIG, metal cutting techniques and small machine operation related welding in addition to weld blueprint reading and related processes. CNC fabrication equipment commonly associated with welding fabrication will also be introduced. Students will be performing hands on welding and completing projects throughout this program to develop hands on skills that employers are looking for.

Program Requirements

Code	Title	Hours
Required Program Core		
340MFGT 105	Introduction to Advanced Manufacturing I	3
340MFGT 106	Introduction to Advanced Manufacturing II	3
340MFGT 107	Introduction to Advanced Manufacturing III	3
340MFGT 108	Robotics I	3
340MFGT 109	Introduction to Manual Machining	3
340MFGT 110	CNC I Operations	3
340MFGT 153	Welding I GMAW	3
340MFGT 154	Welding II GTAW	3
340MFGT 210	Automated Fabrication I	3
340MFGT 251	Welding III-Advanced Welding	3
Total Hours		30

Pathway

This is an **example course sequence** for students interested in pursuing Welding Engineering Technology. This does not represent a contract,

nor does it guarantee course availability. If this pathway is followed as outlined, you will earn Basic Certificates (BC) in Manufacturing Technology and CNC Technology and an Advanced Certificate (AC) in Welding Engineering Technology.

Semester-by-Semester Program Plan for Full-Time Students

All plans can be modified to fit the needs of part-time students by adding more semesters.

Semester 1		Hours
340MFGT 105	Introduction to Advanced Manufacturing I	3
340MFGT 106	Introduction to Advanced Manufacturing II	3
340MFGT 107	Introduction to Advanced Manufacturing III	3
340MFGT 108	Robotics I	3
340MFGT 153	Welding I GMAW	3
Hours		15
Semester 2		
340MFGT 109	Introduction to Manual Machining	3
340MFGT 110	CNC I Operations	3
340MFGT 154	Welding II GTAW	3
340MFGT 210	Automated Fabrication I	3
Hours		12
Semester 3		
340MFGT 251	Welding III-Advanced Welding	3
Hours		3
Total Hours		30

Careers

This program can prepare students for the jobs listed below. Click on each one to learn more, including average earnings, annual job openings, and how much education people in that field have. For additional guidance and resources on career options, current City Colleges students

and alumni can contact the Career Services Office (<https://www.ccc.edu/departments/Pages/Career-Services.aspx>).

Welders, Cutters, Solderers, and Brazers

Job Description

Use hand-welding, flame-cutting, hand-soldering, or brazing equipment to weld or join metal components or to fill holes, indentations, or seams of fabricated metal products.

Salary Based on Experience Level

Take a look at the average hourly/annual earnings for this career in Cook County

Lightcast earnings figures are based on OES data from the BLS and include base rate, cost of living allowances, guaranteed pay, hazardous-duty pay, incentive pay (including commissions and bonuses), on-call pay, and tips.

Annual Wages

Entry-Level 10 th Percentile	\$34,923
Median 50 th Percentile	\$48,427
Senior-Level 90 th Percentile	\$71,171

Hourly Wages

Entry-Level 10 th Percentile	\$17
Median 50 th Percentile	\$23
Senior-Level 90 th Percentile	\$34

Annual Job Openings

458 annual openings in Cook County

National Education Attainment

Here, you can see the level of education that people in this career complete.

Degree Program	% of Jobs
A high school diploma or less	74.38%
A certificate	11.64%
Some college	11.28%
An Associate degree	1.75%
A Bachelor's degree	0.94%
A Master's or Professional degree	0.00%
A Doctoral degree or more	0.00%

0.94% continue their education beyond an associate degree

Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders

Job Description

Set up, operate, or tend welding, soldering, or brazing machines or robots that weld, braze, solder, or heat treat metal products, components, or assemblies. Includes workers who operate laser cutters or laser-beam machines.

Salary Based on Experience Level

Take a look at the average hourly/annual earnings for this career in Cook County

Lightcast earnings figures are based on OES data from the BLS and include base rate, cost of living allowances, guaranteed pay, hazardous-duty pay, incentive pay (including commissions and bonuses), on-call pay, and tips.

Annual Wages

Entry-Level 10 th Percentile	\$40,095
Median 50 th Percentile	\$44,697
Senior-Level 90 th Percentile	\$82,385

Hourly Wages

Entry-Level 10 th Percentile	\$19
Median 50 th Percentile	\$21
Senior-Level 90 th Percentile	\$40

Annual Job Openings

24 annual openings in Cook County

National Education Attainment

Here, you can see the level of education that people in this career complete.

Degree Program	% of Jobs
A high school diploma or less	53.79%
A certificate	35.82%
Some college	10.39%
An Associate degree	0.00%
A Bachelor's degree	0.00%
A Master's or Professional degree	0.00%
A Doctoral degree or more	0.00%

0.00% continue their education beyond an associate degree

Millwrights

Job Description

Install, dismantle, or move machinery and heavy equipment according to layout plans, blueprints, or other drawings.

Salary Based on Experience Level

Take a look at the average hourly/annual earnings for this career in Cook County

Lightcast earnings figures are based on OES data from the BLS and include base rate, cost of living allowances, guaranteed pay, hazardous-duty pay, incentive pay (including commissions and bonuses), on-call pay, and tips.

Annual Wages

Entry-Level 10 th Percentile	\$42,201
Median 50 th Percentile	\$82,135
Senior-Level 90 th Percentile	\$115,064

Hourly Wages

Entry-Level 10 th Percentile	\$20
Median 50 th Percentile	\$39
Senior-Level 90 th Percentile	\$55

Annual Job Openings

52 annual openings in Cook County

National Education Attainment

Here, you can see the level of education that people in this career complete.

Degree Program	% of Jobs
A high school diploma or less	50.00%
A certificate	36.36%
Some college	9.09%
An Associate degree	4.55%
A Bachelor's degree	0.00%
A Master's or Professional degree	0.00%
A Doctoral degree or more	0.00%

0.00% continue their education beyond an associate degree