CNC ENGINEERING TECHNOLOGY, ASSOCIATE IN APPLIED SCIENCE

College(s): DA, WR

Program Code: 0449

The Associate in Applied Science (AAS) in CNC Engineering Technology builds on the AC in CNC Engineering Technology adding in the additional materials, Computer Aided Manufacturing and Advanced Metrology skills students need when pursuing careers in advanced manufacturing. Students in this program are looking to pursue careers leading teams and solving problems for manufacturing employers in the metal working industries that are increasingly becoming more automated and integrated with advanced technologies.

Program Requirements

Code	Title	Hours
General Education Requirements [1]		
MATH 140	College Algebra	4
ENGLISH 101	Composition	3
Social and Behavioral Sciences		3
Fine Arts/Humanities		3
Physical Sciences/Life Sciences		3
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
or 340MFGT 19	Manual Machining II	
340MFGT 160	CNC II Operations and Programming	3
340MFGT 170	CAD I	3
340MFGT 171	Automated Metrology-Quality Assurance	3
340MFGT 172	Quality Systems I	3
340MFGT 209	Computer Aided Manufacturing (CAM) I	3
340MFGT 210	Automated Fabrication I	3
340MFGT 260	CNC III - Advanced Operations	3
340MFGT 274	Materials II - Testing and Analysis	3
Total Hours		**61**

[1] At least one course must meet the Human Diversity (HD) (https://catalog.ccc.edu/hd/) requirement.

Pathway

This is an **example course sequence** for students interested in pursuing CNC 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) and Associate in Applied Science (AAS) Degree in CNC 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 110	CNC I Operations	3
	Hours	**15**
Semester 2		
340MFGT 109	Introduction to Manual Machining	3
340MFGT 153 or 340MFGT 195	Welding I GMAW or Manual Machining II	3
340MFGT 160	CNC II Operations and Programming	3
340MFGT 170	CAD I	3
ENGLISH 101	Composition [1]	3
	Hours	**15**
Semester 3		
340MFGT 171	Automated Metrology-Quality Assurance	3
340MFGT 209	Computer Aided Manufacturing (CAM) I	3
340MFGT 260	CNC III - Advanced Operations	3
Social and Behavioral Sciences course (HD) [1]		3
MATH 140	College Algebra [1]	4
	Hours	**16**
Semester 4		
340MFGT 172	Quality Systems I	3
340MFGT 210	Automated Fabrication I	3
340MFGT 274	Materials II - Testing and Analysis	3
Fine Arts/Humanities course (HD) [1]		3
Physical Sciences/Life Sciences course [1]		3
	Hours	**15**
	Total Hours	**61**

[1] General Education course

Choose your courses with your College Advisor.

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).

Machinists

Job Description

Set up and operate a variety of machine tools to produce precision parts and instruments out of metal. Includes precision instrument makers who fabricate, modify, or repair mechanical instruments. May also fabricate and modify parts to make or repair machine tools or maintain industrial machines, applying knowledge of mechanics, mathematics, metal properties, layout, and machining procedures.

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 10th Percentile	$39,144
Median 50th Percentile	$60,547
Senior-Level 90th Percentile	$82,905

Hourly Wages

Entry-Level 10th Percentile	$19
Median 50th Percentile	$29
Senior-Level 90th Percentile	$40

Annual Job Openings

475 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	49.54%
A certificate	33.12%
Some college	17.34%
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

Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic

Job Description

Set up, operate, or tend more than one type of cutting or forming machine tool or robot.

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 10th Percentile	$34,794
Median 50th Percentile	$44,178
Senior-Level 90th Percentile	$58,941

Hourly Wages

Entry-Level 10th Percentile	$17
Median 50th Percentile	$21
Senior-Level 90th Percentile	$28

Annual Job Openings

221 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	82.78%
A certificate	7.64%
Some college	5.64%
An Associate degree	3.94%
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

Inspectors, Testers, Sorters, Samplers, and Weighers

Job Description

Inspect, test, sort, sample, or weigh nonagricultural raw materials or processed, machined, fabricated, or assembled parts or products for defects, wear, and deviations from specifications. May use precision measuring instruments and complex test equipment.

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 10th Percentile	$36,809
Median 50th Percentile	$49,186
Senior-Level 90th Percentile	$79,104

Hourly Wages

Entry-Level 10th Percentile	$18
Median 50th Percentile	$24
Senior-Level 90th Percentile	$38

Annual Job Openings

1243 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	69.81%
A certificate	26.89%
Some college	2.64%
An Associate degree	0.66%
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

Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic

Job Description

Set up, operate, or tend machines to saw, cut, shear, slit, punch, crimp, notch, bend, or straighten metal or plastic material.

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 10th Percentile	$37,532
Median 50th Percentile	$49,723
Senior-Level 90th Percentile	$75,191

Hourly Wages

Entry-Level 10th Percentile	$18
Median 50th Percentile	$24
Senior-Level 90th Percentile	$36

Annual Job Openings

276 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	64.29%
A certificate	34.85%
Some college	0.86%
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