

# MANUFACTURING TECHNOLOGY, BASIC CERTIFICATE



College(s): DA, WR

Program Code: 0446

This is an entry level certificate that all Applied Engineering students will proceed through prior to pursuing specific focus areas. This program will give the student a broad overview and introduction to the technologies and processes in manufacturing. Studies include, robotics, fluid power, industrial electricity and controls, welding theory, CNC (computer numerical control) theory, CAD (Computer Aided Design) and Rapid Prototyping (maker spaces). Students will learn safety, math and material science while learning about the manufacturing technologies in this program

## Program Requirements

Code	Title	Hours
<b>Required Program Core</b>		
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
<b>Total Hours</b>		<b>12</b>

## Pathway

This is an **example course sequence** for students interested in earning a Basic Certificate (BC) in Manufacturing Technology. It does not represent a contract, nor does it guarantee course availability.

## 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
<b>Hours</b>		<b>12</b>
<b>Total Hours</b>		<b>12</b>

## 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>).

## Cutting and Slicing Machine Setters, Operators, and Tenders

### Job Description

Set up, operate, or tend machines that cut or slice materials, such as glass, stone, cork, rubber, tobacco, food, paper, or insulating 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 10 <sup>th</sup> Percentile	\$41,126
Median 50 <sup>th</sup> Percentile	\$49,623
Senior-Level 90 <sup>th</sup> Percentile	\$66,521

### Hourly Wages

Entry-Level 10 <sup>th</sup> Percentile	\$20
Median 50 <sup>th</sup> Percentile	\$24
Senior-Level 90 <sup>th</sup> Percentile	\$32

### Annual Job Openings

77 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	93.50%
A certificate	4.91%
Some college	1.29%
An Associate degree	0.00%
A Bachelor's degree	0.29%
A Master's or Professional degree	0.00%
A Doctoral degree or more	0.00%

0.29% continue their education beyond an associate degree

## Forging Machine Setters, Operators, and Tenders, Metal and Plastic

### Job Description

Set up, operate, or tend forging machines to taper, shape, or form metal or plastic parts.

### 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 <sup>th</sup> Percentile	\$44,957
Median 50 <sup>th</sup> Percentile	\$51,007
Senior-Level 90 <sup>th</sup> Percentile	\$61,404

### Hourly Wages

Entry-Level 10 <sup>th</sup> Percentile	\$22
Median 50 <sup>th</sup> Percentile	\$25
Senior-Level 90 <sup>th</sup> Percentile	\$30

### Annual Job Openings

10 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	100.00%
A certificate	0.00%
Some college	0.00%
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

## Team Assemblers

### Job Description

Work as part of a team having responsibility for assembling an entire product or component of a product. Team assemblers can perform all tasks conducted by the team in the assembly process and rotate through all or most of them, rather than being assigned to a specific task on a permanent basis. May participate in making management decisions affecting the work. Includes team leaders who work as part of the team.

### 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 <sup>th</sup> Percentile	\$31,364
Median 50 <sup>th</sup> Percentile	\$38,740
Senior-Level 90 <sup>th</sup> Percentile	\$57,412

### Hourly Wages

Entry-Level 10 <sup>th</sup> Percentile	\$15
Median 50 <sup>th</sup> Percentile	\$19
Senior-Level 90 <sup>th</sup> Percentile	\$28

### Annual Job Openings

2626 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	85.25%
A certificate	0.47%
Some college	6.61%
An Associate degree	0.94%
A Bachelor's degree	6.74%
A Master's or Professional degree	0.00%
A Doctoral degree or more	0.00%

6.74% continue their education beyond an associate degree

## Electrical and Electronic Equipment Assemblers

### Job Description

Assemble or modify electrical or electronic equipment, such as computers, test equipment telemetering systems, electric motors, and batteries.

### 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 <sup>th</sup> Percentile	\$31,443
Median 50 <sup>th</sup> Percentile	\$38,926
Senior-Level 90 <sup>th</sup> Percentile	\$58,946

Hourly Wages	
Entry-Level 10 <sup>th</sup> Percentile	\$15
Median 50 <sup>th</sup> Percentile	\$19
Senior-Level 90 <sup>th</sup> Percentile	\$28

### Annual Job Openings

594 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	80.15%
A certificate	8.20%
Some college	11.65%
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

## Electromechanical Equipment Assemblers

### Job Description

Assemble or modify electromechanical equipment or devices, such as servomechanisms, gyros, dynamometers, magnetic drums, tape drives, brakes, control linkage, actuators, and appliances.

### 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 <sup>th</sup> Percentile	\$31,443
Median 50 <sup>th</sup> Percentile	\$38,926
Senior-Level 90 <sup>th</sup> Percentile	\$58,946

Hourly Wages	
Entry-Level 10 <sup>th</sup> Percentile	\$15
Median 50 <sup>th</sup> Percentile	\$19
Senior-Level 90 <sup>th</sup> Percentile	\$28

### Annual Job Openings

594 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	52.73%
A certificate	10.77%
Some college	16.88%
An Associate degree	19.04%
A Bachelor's degree	0.00%
A Master's or Professional degree	0.00%
A Doctoral degree or more	0.58%

0.58% continue their education beyond an associate degree