



DEGREE CODES:

AAS 0770F
BC (QA) 0729
BC (FA) 0726

PATHWAY: Manufacturing Technology: Factory Automation

Visit your College Advisor, ccc.edu, or your college's Transfer Center for more information.

This is an **example course sequence** for students interested in earning a degree in Manufacturing Technology. It does not represent a contract, nor does it guarantee course availability. If this pathway is followed as outlined, you will earn a Basic Certificate (BC) in Quality Assurance (QA), a Basic Certificate and an Associate in Applied Science (AAS) in Manufacturing Technology. One course will satisfy the Human Diversity (HD) requirement, and is labeled with an (HD) in the sequence below. This does not represent a contract, nor does it guarantee course availability.

The AAS degree program in Manufacturing Technology offers the technologies required for maintenance mechanics in the manufacturing or service industries and covers theory and practical projects. The program is appropriate for career changers, high school graduates, general education diploma holders, and machining workers with a need to enhance their careers.

Factory Automation technicians operate, maintain, repair, and install automated production equipment used through manufacturing. In addition to the traditional mechanical and electrical skills, modern production requires digital, programmable skills such as robotic programming, sensor technology, and the use of Programmable Logic Controllers.

This certificate provides foundational mechanical and electrical skills for entry level jobs in maintenance, repair and installation of manufacturing production equipment. Program completers will be employable as a maintenance mechanic trainee or helper, and as a building maintenance trainee. Students will also have the opportunity to earn the Manufacturing Skill Standards Council's (MSSC) credential in Maintenance Awareness.

Choose your courses with your College Advisor.

Communications and mathematics pre-credit requirements. Placements based on current placement instrument, ACT or department chair recommendation.			College-level courses that can be taken while in pre-credit courses.	
ENGLISH PLACEMENT	READING PLACEMENT	MATHEMATICS PLACEMENT	REQUIRED PROGRAM CORE	ELECTIVE COURSES
<input type="checkbox"/> ESL/FS Writing	<input type="checkbox"/> ESL/FS Reading	<input type="checkbox"/> FS Mathematics I	<input type="checkbox"/> Manufacturing 111	<input type="checkbox"/> INTDSP 102
<input type="checkbox"/> ESL/English 98	<input type="checkbox"/> ESL/Reading 99	<input type="checkbox"/> FS Mathematics II	<input type="checkbox"/> Manufacturing 112	
<input type="checkbox"/> ESL 99	<input type="checkbox"/> ESL Reading 100	<input type="checkbox"/> Mathematics 98	<input type="checkbox"/> Manufacturing 139	
<input type="checkbox"/> ESL/English 100	<input type="checkbox"/> Reading 125	<input type="checkbox"/> Mathematics 99	<input type="checkbox"/> Manufacturing 141	

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.

D	BC ^{QA}	BC ^{FA}	SEMESTER 1	CATEGORY	ACHIEVEMENTS & NEXT ACTIONS
•	•	•	Manufacturing 151–Introduction Welding (3)	Required Program Core	DO THIS –Meet with advisor to discuss academic goals and plan coursework
•	•	•	Manufacturing 139–Print Requirements and Quality Assurance (3)	Required Program Core	
•	•	•	Manufacturing 141–Manufacturing Materials and Processes (3)	Required Program Core	
•	•	•	Manufacturing 253–Pneumatics (3)	Required Program Core	
•	•	•	Manufacturing 255–Industrial Hydraulics (3)	Required Program Core	
15 CREDIT HOURS					
D	BC ^{QA}	BC ^{FA}	SEMESTER 2	CATEGORY	ACHIEVEMENTS & NEXT ACTIONS
•	•	•	Manufacturing 138–Introduction to SolidWorks (3)	Required Program Core	ALMOST halfway through Associate in Applied Science degree DO THIS –Meet with advisor to confirm plans
•	•	•	Manufacturing 152–Intermediate Welding (3)	Required Program Core	
•	•	•	Manufacturing 292–Principles of Mechanisms (3)	Required Program Core	
•	•	•	Manufacturing 191–Industrial Electricity (4)	Required Program Core	
•	•	•	Mathematics 125–Introductory Statistics (4)	Mathematics	
17 CREDIT HOURS					
D	BC ^{QA}	BC ^{FA}	SEMESTER 3	CATEGORY	ACHIEVEMENTS & NEXT ACTIONS
•	•	•	English 101–Composition I (3)	Communications	COMPLETION of Basic Certificate in Factory Automation DO THIS –Go to Career Center to explore both continued education and employment options DO THIS –Mid-term check-in with advisor
•	•	•	Manufacturing 143–Advanced Metrology (3)	Required Program Core	
•	•	•	Manufacturing 142–Geometric Dimensioning and Tolerancing (3)	Required Program Core	
•	•	•	Manufacturing 295–Electrical Motor Controls (3)	Required Program Core	
•	•	•	Manufacturing 291–Programmable Logic Controls (3)	Required Program Core	
15 CREDIT HOURS					

CITY COLLEGES OF CHICAGO 2019–20 ACADEMIC CATALOG

ADVANCED MANUFACTURING

D	BC ^{OA}	BC ^{FA}	SEMESTER 4	CATEGORY	ACHIEVEMENTS & NEXT ACTIONS
•	•	•	Manufacturing 104—Statistical Process Control (3)	<i>Required Program Core</i>	COMPLETION of Basic Certificate in Quality Assurance COMPLETION of Associate in Applied Science in Manufacturing Technology
•	•	•	Art 103—Art Appreciation (3)	<i>Fine Arts & Humanities</i>	
•	•	•	Manufacturing 145—Computer Integrated Machining (CIM) (3)	<i>Required Program Core</i>	
•	•	•	History 247—History of Latin America (HD) (3)	<i>General Education (HD)</i>	
•	•	•	Sociology 207—Sociology of Sex and Gender (3)	<i>Social & Behavioral Sciences</i>	
15 CREDIT HOURS					
DEGREE MINIMUM: 62 CREDIT HOURS // PATHWAY TOTAL: 62 CREDIT HOURS					
•	•	•	Manufacturing 297—Advanced Mechanical Systems (3)	<i>Required Program Core</i>	COMPLETION of Advanced Certificate in Factory Automation
•	•	•	Manufacturing 145—Computer Integrated Machining (CIM) (3)	<i>Required Program Core</i>	
6 CREDIT HOURS					
DEGREE MINIMUM: 62 CREDIT HOURS // PATHWAY TOTAL: 62 CREDIT HOURS					

D = DEGREE // AC = ADVANCED CERTIFICATE // BC = BASIC CERTIFICATE

Programs offered at:       