

CT STATE COMMUNITY COLLEGE

Asnuntuck Campus

Advanced Manufacturing Technology Programs



For more information or to schedule a tour, please email:

as-manufacturing@acc.commnet.edu

Technology Studies: Robotics and Mechatronics Technician Certificate

Required Courses

- [MFG 1330 - Mathematics for Electricity and Electronics](#) *Credits: 3*
- [MFG 1220 - Digital Concepts](#) *Credits: 3*
 - *(Additional 2 Hour Supplemental Lab)*
- [MFG 1250 - Robotic Automation](#) *Credits: 3*
 - *(Additional 2 Hour Supplemental Lab)*
- [MFG 1210 - Circuit Design and Diagnostics](#) *Credits: 4*
 - *(Additional 2 Hour Supplemental Lab)*
- [MFG 1240 - Motor Controls for Automation](#) *Credits: 3*
 - *(Additional 2 Hour Supplemental Lab)*
- [MFG 1245 - Programmable Logic Controllers Applications](#) *Credits: 3*
 - *(Additional 2 Hour Supplemental Lab)*
- [MFG 1230 - Industrial Fluid Power](#) *Credits: 3*
 - *(Additional 2 Hour Supplemental Lab)*
- [MFG 1235 - Industrial Maintenance, Service and Repair](#) *Credits: 3*
 - *(Additional 2 Hour Supplemental Lab)*
- [MFG 1225 - Digital Controls](#) *Credits: 3*
 - *(Additional 2 Hour Supplemental Lab)*
- [MFG 1200 - Automation Fundamentals](#) *Credits: 3*
 - *(Additional 2 Hour Supplemental Lab)*
- [MFG 1415 - Safety in the Workplace](#) *Credits: 1*
- [MFG 1479 - Career Awareness for Manufacturing](#) *Credits: 1*

Total Credits: 33



Technology Studies: Robotics and Mechatronics Technician

Technology Studies General Education Core (23 credits)

- [ENG 1010 - Composition](#) Credits: 3
- [MATH 1610 - Precalculus](#) Credits: 4
- ART Elective Credits: 3
- [CHEM 1110 - Concepts of Chemistry](#) Credits: 4
- **OR** [CHEM 1210 - General Chemistry I](#) Credits: 4
- [Elective HISX - Historical Knowledge Course](#) Credits: 3
- **OR** [Elective SBSX](#) course in ECON Credits: 3
- [ENG 1080 - Composition II: Technical Writing and Presentations](#) Credits: 3
- **OR** [COMM 1301 - Public Speaking](#) Credits: 3
- [CCS 1001 - College & Career Success](#) Credits: 3

Technology Studies Program Core (10-11 credits)

- [PHYS 1201 - General Physics I](#) Credits: 4
- **OR** [PHYS 2201 - Calculus-Based Physics I](#) Credits: 4
- [Elective BHEL - Behavioral Science Elective](#) Credits: 3 choose an ANTH, PSY or SOC course
- [MATH 1200 - Statistics I](#) Credits: 3
- **OR** [MATH 1201 - Statistics I with Computer Applications](#) Credits: 4

Robotics and Mechatronics Tech Courses (32 credits)

- [MFG 1330 - Mathematics for Electricity and Electronics](#) Credits: 3
- [MFG 1220 - Digital Concepts](#) Credits: 3
- [MFG 1250 - Robotic Automation](#) Credits: 3
- [MFG 1210 - Circuit Design and Diagnostics](#) Credits: 4
- [MFG 1240 - Motor Controls for Automation](#) Credits: 3
- [MFG 1245 - Programmable Logic Controllers Applications](#) Credits: 3
- [MFG 1230 - Industrial Fluid Power](#) Credits: 3
- [MFG 1235 - Industrial Maintenance, Service and Repair](#) Credits: 3
- [MFG 1225 - Digital Controls](#) Credits: 3
- [MFG 1200 - Automation Fundamentals](#) Credits: 3
- [MFG 1415 - Safety in the Workplace](#) Credits: 1

Total Credits: 65-66

Technology Studies

Machine Technology Certificate Option 2

Required Courses (24 Credits)

- MFG 1405 - Manufacturing Math *Credits: 3*
- MFG 1415 - Safety in the Workplace *Credits: 1*
- MFG 1424 - Blueprint Reading 1 *Credits: 3*
- **OR** EGR 1120 - Engineering Drawing Specs *Credits: 3*
- MFG 1453 - Benchwork *Credits: 2*
 - *(Additional 2 Hour Supplemental Lab)*
- MFG 1477 - Machine Technology Fundamentals *Credits: 4*
 - *(Additional 4 Hour Supplemental Lab)*
- MFG 1478 - CNC Fundamentals *Credits: 3*
 - *(Additional 3 Hour Supplemental Lab)*
- MFG 2456 - Advanced CNC *Credits: 3*
 - *(Additional 3 Hour Supplemental Lab)*
- MFG 2477 - Advanced Machine Technology *Credits: 4*
 - *(Additional 4 Hour Supplemental Lab)*
- MFG 1479 - Career Awareness for Manufacturing *Credits 1*

Choose 4 Directed Electives (12 credits)

- MFG 1010 - Parametric Design (SolidWorks) *Credits: 3*
- **OR** CAD 2200 - Parametric Design (SolidWorks) *Credits: 3*
- MFG 1414 - Quality & Lean Principles *Credits: 3*
- **OR** MFG 1413 - Principles of Quality Control *Credits: 3*
- MFG 1420 - Metrology *Credits: 3*
- MFG 1425 - Blueprint Reading 2 with GD & T *Credits: 3*
- MFG 2405 - Principles of CNC with Mastercam *Credits: 3*
- MFG 2439 - Geometric Dimension & Tolerancing (GD&T) *Credits: 3*
- MFG 1400 - Advanced Metrology with CMM (Computerized Measurement Machine) *Credits: 3*
- MFG 1409 - Introduction to MasterCAM *Credits: 3*



Total Credits: 36



Technology Studies: Machine Technology Option 2

Technology Studies General Education Core (23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1610 - Precalculus *Credits: 4*
- ART Elective *Credits: 3*
- CHEM 1110 - Concepts of Chemistry *Credits: 4*
- **OR** CHEM 1210 - General Chemistry I *Credits: 4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- **OR** Elective SBSX course in ECON *Credits: 3*
- ENG 1080 - Composition II: Technical Writing and Presentations *Credits: 3*
- **OR** COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Technology Studies Program Core (10-11 credits)

- PHYS 1201 - General Physics I *Credits: 4*
- **OR** PHYS 2201 - Calculus-Based Physics I *Credits: 4*
- Elective BHEL - Behavioral Science Elective *Credits: 3* choose an ANTH, PSY or SOC course
- MATH 1200 - Statistics I *Credits: 3*
- **OR** MATH 1201 - Statistics I with Computer Applications *Credits: 4*

Manufacturing Technology Option #2 (24 Credits)

- MFG 1405 - Manufacturing Math *Credits: 3*
- MFG 1415 - Safety in the Workplace *Credits: 1*
- MFG 1424 - Blueprint Reading 1 *Credits: 3*
- **OR** EGR 1120 - Engineering Drawing Specs *Credits: 3*
- MFG 1453 - Benchwork *Credits: 2*
- MFG 2477 - Advanced Machine Technology *Credits: 4*
- MFG 1478 - CNC Fundamentals *Credits: 3*
- MFG 2456 - Advanced CNC *Credits: 3*
- MFG 1477 - Machine Technology Fundamentals *Credits: 4*

Choose 4 Directed Electives (12 Credits)

- MFG 1010 - Parametric Design (SolidWorks) *Credits: 3*
- **OR** CAD 2200 - Parametric Design (SolidWorks) *Credits: 3*
- MFG 1414 - Quality & Lean Principles *Credits: 3*
- MFG 1420 - Metrology *Credits: 3*
- MFG 1425 - Blueprint Reading 2 with GD & T *Credits: 3*
- MFG 2405 - Principles of CNC with Mastercam *Credits: 3*
- MFG 2439 - Geometric Dimension & Tolerancing (GD&T) *Credits: 3*
- MFG 1400 - Advanced Metrology with CMM (Computerized Measurement Machine) *Credits: 3*
- MFG 1409 - Introduction to MasterCAM *Credits: 3*

Total Credits: 68-69



Technology Studies

Welding & Fabrication Certificate

Required Courses

- [MFG 1000 - Math for Welders](#) Credits: 3
- [MFG 1479 - Career Awareness for Manufacturing](#) Credits: 1
- [MFG 1020 - Introduction to Welding](#) Credits: 4
 - (Additional 6 Hour Supplemental Lab)
- [MFG 1050 - Welding Theory I](#) Credits: 3
- [MFG 1028 - Blueprint Reading for Welders](#) Credits: 3
- [MFG 1049 - Introduction to Metal Fabrication](#) Credits: 3
 - (Additional 3 Hour Supplemental Lab)
- [MFG 1415 - Safety in the Workplace](#) Credits: 1
- [MFG 2081 - Advanced Welding](#) Credits: 3
 - (Additional 7 Hour Supplemental Lab)
- [MFG 2050 - Welding Theory II](#) Credits: 3
- [MFG 2073 - Welding Codes, Testing, and Certification](#) Credits: 3
- [MFG 2080 - Advanced Fabrication](#) Credits: 3
 - (Additional 7 Hour Supplemental Lab)
- [MFG 2070 - Welding Automation & Processes](#) Credits: 3
- [MFG 2067 - Metallurgy](#) Credits: 3

Total Credits: 36



Welding & Fabrication

Technology Studies General Education Core (23 credits)

- [ENG 1010 - Composition](#) *Credits: 3*
- [MATH 1610 - Precalculus](#) *Credits: 4*
- [ART Elective](#) *Credits: 3*
- [CHEM 1110 - Concepts of Chemistry](#) *Credits: 4*
- **OR** [CHEM 1210 - General Chemistry I](#) *Credits: 4*
- [Elective HISX - Historical Knowledge Course](#) *Credits: 3*
- **OR** [Elective SBSX](#) course in ECON *Credits: 3*
- [ENG 1080 - Composition II: Technical Writing and Presentations](#) *Credits: 3*
- **OR** [COMM 1301 - Public Speaking](#) *Credits: 3*
- [CCS 1001 - College & Career Success](#) *Credits: 3*

Technology Studies Program Core (10-11 credits)

- [PHYS 1201 - General Physics I](#) *Credits: 4*
- **OR** [PHYS 2201 - Calculus-Based Physics I](#) *Credits: 4*
- [Elective BHEL - Behavioral Science Elective](#) *Credits: 3* choose an ANTH, PSY or SOC course
- [MATH 1200 - Statistics I](#) *Credits: 3*
- **OR** [MATH 1201 - Statistics I with Computer Applications](#) *Credits: 4*

Welding & Fabrication Courses (35 credits)

- [MFG 1020 - Introduction to Welding](#) *Credits: 4*
- [MFG 1050 - Welding Theory I](#) *Credits: 3*
- [MFG 1028 - Blueprint Reading for Welders](#) *Credits: 3*
- [MFG 1000 - Math for Welders](#) *Credits: 3*
- [MFG 1049 - Introduction to Metal Fabrication](#) *Credits: 3*
- [MFG 1415 - Safety in the Workplace](#) *Credits: 1*
- [MFG 2081 - Advanced Welding](#) *Credits: 3*
- [MFG 2050 - Welding Theory II](#) *Credits: 3*
- [MFG 2073 - Welding Codes, Testing, and Certification](#) *Credits: 3*
- [MFG 2080 - Advanced Fabrication](#) *Credits: 3*
- [MFG 2070 - Welding Automation & Processes](#) *Credits: 3*
- [MFG 2067 - Metallurgy](#) *Credits: 3*

Total Credits: 68-69