### Personality + Career





Students in SCC's Precision Machining and Automation Technology program are curious about how things are made, are creative, and often think about how to improve an item or how to make something work better. They like to see their work progress to a finished item and work with machines and tools. Organization and a strong attention to detail are also important.

Program	Credential	What do students learn in the program?	What do students earn?	Career Opportunities	Required Tools, Supplies, and Uniforms
Precision Machining and Automation - <b>General</b> <b>Machinist</b>	Certificate	Students learn to operate equipment used for drilling, tapping, boring, turning, and milling. They also learn about tool geometry, and a large assortment of cutting tools, giving them a strong foundation. Students learn to read blueprints and learn properties of a wide assortment of materials such as steel, brass, and aluminum.	No salary data available for the certificate.	General Machinist. Fixture maker, repair and rebuild of components that need manual machining as part of the process. Work that has a +/005 tolerance or greater is acceptable.	Tools are required. List provided. No uniform is required for this program.
Precision Machining and Automation Technology	Diploma	Students learn to operate equipment used for drilling, tapping, boring, turning, milling, and precision grinding. They also learn about tool geometry, and a large assortment of cutting tools, giving them a strong foundation. Students learn to read blueprints and learn properties of a wide assortment of materials such as steel, brass, and aluminum. They will learn basic programming and operation of Haas CNC mills, lathes and Coordinate Measuring Machines.	No salary data available for the diploma.	General machinist with entry level CNC programming and operations. Manual Machining and precision grinder. CNC operator. Work that has a +/0003 tolerance or greater is acceptable.	Tools are required. List provided. No uniform is required for this program.
Precision Machining and Automation Technology - Advanced CNC & Automation	Associate of Applied Science	In addition to the skills noted in the diploma option, students learn the fundamentals of 2D CAD systems and full 3D solid modeling using Solidworks.  Students will also advance their CNC skills and learn Computer Aided Manufacturing utilizing Mastercam CAM software. The Advanced CNC and Automation option digs deep into maximizing your CNC machine for peak performance. Learn advanced programming techniques. Students will design and build their own piece of automated equipment that processes product.	\$27.75 per hour; \$57,720 annually	Precision Machinist, CNC programmer, CAD/CAM programmer and designer. Tooling Designer and Machinist. Advanced CNC Programmer and set-up in a production or toolroom setting. Fixture and equipment designer and builder.	Tools are required. List provided. No uniform is required for this program.
Precision Machining and Automation Technology - Tool Maker Mold and Die	Associate of Applied Science	In addition to the skills noted in the diploma option, students learn the fundamentals of 2D CAD systems and full 3D solid modeling using Solidworks.  Students will also advance their CNC skills and learn Computer Aided Manufacturing utilizing Mastercam CAM software. The Tool Maker focus has an emphasis on the world of Mold and Die making. Students will design and build custom Molds and Dies of their own design using Manual and CNC Equipment. EDM's are a unique part of the Toolmaker option.	\$27.75 per hour; \$57,720 annually	Precision Machinist, CNC programmer, CAD/CAM programmer and designer. Mold Designer, Die Designer. and Machinist. Mold press and Stamping press set-up and troubleshooting.	Tools are required. List provided. No uniform is required for this program.

### Your Next Steps to Choose SCC

- ► Schedule a Campus Visit southeast.edu/visit
- Explore career options with an Admissions Counselor southeast.edu/admissionsadvising
- ► Apply <u>southeast.edu/applynow</u>

### Paying for SCC

- ► Free Application for Federal Student Aid (FAFSA) <u>studentaid.gov/h/apply-for-aid/fafsa</u>
- ► Scholarships southeast.edu/scholarships
- ▶ Payment Plan <u>mycollegepaymentplan.com/southeast</u>
- ➤ Veteran Education Benefits <u>southeast.edu/veterans-services</u>
- ► GAP Assistance Program <u>southeast.edu/gap</u>
- Children of State Teammate Tuition Reimbursement Program southeast.edu/children-of-state-teammate-tuition-reimbursement-program



Scan this code to find out more about CNC and Automation

Scan this code to find out more about Tool Maker, Mold & Die



### Contact Admissions to get started!

402-437-2600, 800-642-4075 ext. 2600

☑ admissions@southeast.edu



# Precision Machining and Automation Technology

2024-2025 / » southeast.edu



Anything that is built, regardless of size, requires a machinist to be involved in the process – they are the parts makers of the world. As quickly as the world changes, so do the things that people buy and build every day. SCC's Precision Machining and Automation Technology program is constantly changing to keep up with the needs of the world's manufacturers so our students can be provided with an excellent career opportunity.

Students learn the necessary foundational processes that are needed, as well as modern methods of machining, both traditional and computerized. Students also gain knowledge and experience

in tooling and materials selection, blueprint reading, measurement, project layout, and design and build of projects.

Program Contact Information Kirby Taylor, Program Chair 402-761-8369, 800-933-7223 ext. 8369

SCC is an equal opportunity educator and employer. SCC es un patrono con Igualdad de Oportunidades en el Empleo y la Educación. // southeast.edu/diversity // A0752rev1 (03/25)

## The SCC Experience

- >>> The SCC Precision Machining and Automation Technology program is hands-on! Students spend 175-275 hours in the lab each semester for a total of 900+ hours for the entire program. The 12:1 student-tofaculty ratio in the program ensures that students receive significant personal attention while they learn.
- )) Approximately 75% of students enter the program with little or no machining experience, and due to the experienced SCC faculty, graduate with highly sought-after machining skills from employers all over the country. The job demand for machinists is high and available in many fields. Faculty are committed to student success and will help them achieve their goals!
- Associate of Applied Science students, in their fourth semester, have the opportunity to design and build their own capstone project. Students design all elements of their project and then create their functional project. This project equips students with the skills, experience, and confidence that enables to them to immediately make an impact in the workforce.
- >>> SCC and regional industry partners have invested significant resources into the Precision Machining and Automation Technology program. The lab features CNC machines, lathes, grinders, drill presses, and milling machines. SCC has one of the largest machining labs in the country and is committed to ensuring students learn on up-to-date equipment so they are ready for any worksite.





Many tools are provided and students are only asked to purchase minimum tools in their first term, giving them time to explore and learn. Students then add to tools in future semesters. Tools are an investment in a student's career and SCC works with a variety of tool vendors to give students options. Many vendors offer students a significant discount. Students can also purchase tools from other vendors not associated with the College. Program faculty and advisors will provide students with specific information related to tools prior to the start of their first semester.

During the first week of each semester, tool vendors come to campus and provide students with options to buy single tools or tool sets based on program needs. Faculty will be available to help students make selections based on course and program needs.

### Precision Machining & Automation Technology - Required Basic Tool List

### TOOLS REQUIRED BY WEEK THREE OF FIRST TERM:

- Safety Glasses, (2 pr)
- Steel Rule, 6" Flexible
- Dial Calipers, 6"
- Micrometer, 0-1"
- Micrometer, 1-2"
- Travel Indicator. 1"
- Indicator Base, Magnetic
- Indicator Base Kit, Compact
- Gage, Drill Point
- Gage, Center

· Depth Micrometer

Arkansas Stone

- Gage Set, 1/32-1/4 Radius
- Gage Set, 17/32-1/2 Radius
- Scriber Edge Finder
- Screwdriver Set, 2-pc
  - Wrench, Adjustable Hammer, Brass
  - Hammer, Dead Blow
- File, Second Cut, Mill Precision Square, 6" File Handle

**TOOLS REQUIRED BEFORE BEGINNING SECOND TERM:** 

- File Card
- Gage, 60° Thread Pitch Chip Brush

- Tap Handle, 9"
- Tap Handle, 6"
- Chuck Key, K3 size Pliers, Slip Joint
- Hex Key Set, Standard
- Hex Key Set, Metric
- Center Punch Prick Punch
- Countersink Set
- Deburring Tool
- Deburring Tool Replacement Blades
- India Stone

Approx Total: \$2,075

- Test Indicator, .0001'
- Hammer, Ball Peen Gage Set, Telescoping
- Gage Set, Small Hole
- · Pin Punch Set

Tape Measure, 1/2"

Test Indicator, .0005"

Holder, Test Indicator

Diamond Dresser Insert

Parallel Set

• Drill Set, 115 pc

Lavout Fluid

Approx. Total: \$850

The program can provide rolling tool cabinets for student use, however students are encouraged to purchase their own. \*\*\* Space in the lab is limited. Tool cabinets in excess of 30"W x 24"D are not permitted for student use, and will be turned away. \*\*\* SCC instructors can provide you with tool vendors so you can receive special SCC student discount pricing.





Program	Credential	Location	Credit Hours	Tuition/ Fees*	Books/ Fees/ Supplies	Tools	Total Cost*	Starting Term(s)	Number of Semesters Required - Full Time	Is Summer Term Required for Full Time?	Online Option	Can the Program be Completed Entirely Online?	Part-Time Option	Number of Semesters Required - Part Time	Is Summer Term Required for Part Time?	Typical Class Schedule
Precision Machining and Automation - <b>General Machinist</b>	Certificate	Milford	12	R- \$1,476 NR- \$1,728	\$575	\$2,062	R- \$4,113 NR- \$4,365	Fall and Spring	1	No	No	No	Yes	2	No	Monday–Thursday, 8 a.m. – 4 p.m., Friday, 8 a.m. – Noon
Precision Machining and Automation	Diploma	Milford	24.5	R- \$3,014 NR- \$3,528	\$877	\$2,850	R- \$6,741 NR- \$7,255	Fall and Spring	2	No	No	No	Yes	3-4	No	Monday-Thursday, 8 a.m. – 4 p.m., Friday, 8 a.m. – Noon
Precision Machining and Automation - Advanced CNC & Automation	Associate of Applied Science	Milford	49.5	R- \$6,089 NR- \$7,128	\$1,659	\$2,850	R- \$10,598 NR- \$11,637	Fall and Spring	4	No	No	No	Yes	8	No	Monday-Thursday, 8 a.m. – 4 p.m., Friday, 8 a.m. – Noon
Precision Machining and Automation - Tool Maker Mold & Die	Associate of Applied Science	Milford	49.5	R- \$6,089 NR- \$7,128	\$1,755	\$2,850	R- \$10,694 NR- \$11,733	Fall and Spring	4	No	No	No	Yes	8	No	Monday-Thursday, 8 a.m. – 4 p.m., Friday, 8 a.m. – Noon

<sup>\*</sup>Re-Resident, NR-Non-resident. Costs listed are estimates and are subject to change based on the market price of books, supplies, tools, uniforms, etc. Estimated costs also include tuition and fees. Additionally, days/times of week for class, lab, clinical/practicum are subject to change based on curriculum, facilities, instructor, and site availability. Actual program schedules will be provided prior to each enrolled term.