

HAAS ST-10 & STY-10

Lathe Machine Basics

Not-for credit course

PROGRAM INTEGRATION

This stand-alone course will give students basic hands-on experience programming and operating a CNC (Computer Numerical Control) lathe. It will also give them the technical skills needed for more advanced precision machining courses.

PROGRAM INFORMATION

In this basic class, students will receive an in-depth overview of the lathe control, machine operation and setup. Students will learn how to set tool and work offsets using the Renishaw wireless intuitive probing system.

Training Hours: 16

Duration: 4 Weeks

Credentials:

Certificate of Completion

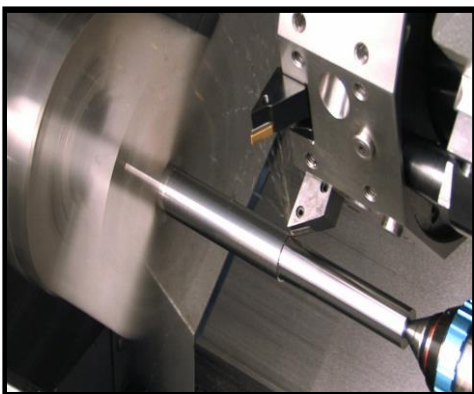
Cost: \$1,360

Location:

191 Fayette Street
Martinsville, VA 24112

PROGRAM OUTCOMES

At the completion of this course, students will be able to act as a high-performing team member, further their knowledge of CNC manufacturing, and keep current with the latest technology.



CONTACT INFORMATION

Pamela Carter-Taylor
Coordinator of Advanced Manufacturing
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HAAS ST-10 & STY-10

Lathe Machine Programming

Not-for credit course

PROGRAM INTEGRATION

This stand-alone course will give students basic hands-on experience programming and operating a CNC (Computer Numerical Control) lathe. It will also give them the technical skills needed for more advanced precision machining courses and industry credentials.

PROGRAM INFORMATION

This course picks up where the HAAS Lathe Basics class left off. It focuses on numerical control techniques in metal forming and machine processes. Includes theory and practice in lathe machine CNC (Computer Numerical Control) program writing, setup and operation.

Training Hours: 16

Duration: 4 Weeks

Credentials:
Certificate of Completion

Cost: \$1,360

Location:
191 Fayette Street
Martinsville, VA 24112

PROGRAM OUTCOMES

At the completion of this course, students will be able to act as a high-performing team member, further their knowledge of CNC manufacturing, and keep current with the latest technology.



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HAAS ST-10 & STY-10

Lathe Machine Intermediate

Not-for credit course

PROGRAM INTEGRATION

This course gives the student the applicable technical skills to pursue their *NIMS Level 2 certification, and or use as credit towards an engineering technology degree.

*NIMS

National Institute for Metalworking Skills

PROGRAM INFORMATION

This intermediate course picks up where the HAAS Lathe Programming course left off. It will begin with two weeks of online machining training and conclude with eight weeks of CNC turning and lab work.

Students will have the opportunity earn industry credentials through both performance and theory assessments. The performance will be the manufacturing of a part, the set-up and operation of a machine or the writing of a program that will manufacture a specific part.

Training Hours: 60

Duration: 10 Weeks

Credentials:

*NIMS Level 1

Cost: \$5,100

Location:

191 Fayette Street
Martinsville, VA 24112

PROGRAM OUTCOMES

At the completion of this course, students will have earned a NIMS Level 1 certification, which clearly demonstrates that they have met the industry benchmark for that competency. Metalworking companies use this type of credentials as a basis for recruiting, hiring, placement and promotion.

CONTACT INFORMATION

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HAAS VF-1

Mill Machine Basics

Not-for credit course

PROGRAM INTEGRATION

This stand-alone course will give new students basic hands-on experience programming, and operating a CNC (Computer Numerical Control) mill. It will also give them the technical skills needed for more advanced precision machining courses.

PROGRAM INFORMATION

In this basic class, students will receive an in-depth overview of the mill control, machine operation and setup. Students will learn how to set tool and work offsets using the Renishaw wireless intuitive probing system.

Training Hours: 16

Duration: 4 Weeks

Credentials:

Certificate of Completion

Cost: \$1,360

Location:

191 Fayette Street
Martinsville, VA 24112

PROGRAM OUTCOMES

At the completion of this course, students will be able to act as a high-performing team member, further their knowledge of CNC manufacturing, and keep current with the latest technology.



CONTACT INFORMATION

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HAAS VF-1

Mill Machine Programming

Not-for credit course

PROGRAM INTEGRATION

This stand-alone course will give new students basic hands-on experience programming, and operating a CNC (Computer Numerical Control) mill. It will also give them the technical skills needed for more advanced precision machining courses and industry credentials.

PROGRAM INFORMATION

This course picks up where the HAAS Mill Basics class left off. It focuses on numerical control techniques in metal forming and machine processes. Includes theory and practice in lathe machine CNC (Computer Numerical Control) program writing, setup and operation.

Training Hours: 16

Duration: 4 Weeks

Credentials:
Certificate of Completion

Cost: \$1,360

Location:
191 Fayette Street
Martinsville, VA 24112

PROGRAM OUTCOMES

At the completion of this course, students will be able to act as a high-performing team member, further their knowledge of CNC manufacturing, and keep current with the latest technology.



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HAAS VF-1

Mill Machine Intermediate

Not-for credit course

PROGRAM INTEGRATION

This course gives the student the applicable technical skills to pursue their NIMS Level 2 certification, and or use as credit towards an engineering technology degree.

***NIMS**

National Institute for Metalworking Skills

PROGRAM INFORMATION

This intermediate course picks up where the HAAS Mill Programming course left off. It will begin with two weeks of online machining training, and conclude with eight weeks of CNC turning and lab work.

Students will have the opportunity earn industry credentials through both performance and theory assessments. The performance will be the manufacturing of a part, the set-up and operation of a machine or the writing of a program that will manufacture a specific part.

Training Hours: 60

Duration: 10 Weeks

Credentials: NIMS Level 1

Cost: \$5,100

Location:

191 Fayette Street
Martinsville, VA 24112

PROGRAM OUTCOMES

At the completion of this course, students will have earned a NIMS Level 1 certification, which clearly demonstrates that they have met the industry benchmark for that competency. Metalworking companies use this type of credentials as a basis for recruiting, hiring, placement and promotion.

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MAZAK VRX-700

5-AXIS MACHINE BASICS

Not-for credit course

PROGRAM INTEGRATION

This stand-alone course will give new students basic hands-on experience programming, and operating a 5-axis milling machine. It will also give them the technical skills needed for more advanced precision machining courses.

PROGRAM INFORMATION

In this basic introductory course, students will receive an in-depth overview of the Mazak 5-Axis milling machine. They will learn how to program and set up the machine using the Mazatrol programming language.

Training Hours: 48

Duration: 8 Weeks

Credentials:

Certificate of Completion

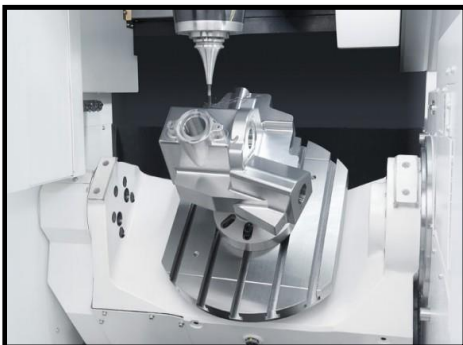
Cost: \$4,080

Location:

191 Fayette Street
Martinsville, VA 24112

PROGRAM OUTCOMES

At the completion of this course, students will be able to act as a high-performing team member, further their knowledge of CNC (Computer Numerical Control) manufacturing, and keep current with the latest technology.



CONTACT INFORMATION

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MAZAK VRX-700

5-AXIS MACHINE PROGRAMMING

Not-for credit course

PROGRAM INTEGRATION

This stand-alone course will give students basic hands-on experience programming and operating a CNC (Computer Numerical Control) 5-axis mill. It will also give them the technical skills needed for more advanced precision machining courses and industry credentials.

PROGRAM INFORMATION

This course picks up where the Mazak Basics class left off. It focuses on numerical control techniques in metal forming and machine processes. Includes theory and practice in 5-axis machine CNC (*Computer Numerical Control*) program writing, setup and operation.

Training Hours: 48

Duration: 8 Weeks

Credentials:

Certificate of Completion

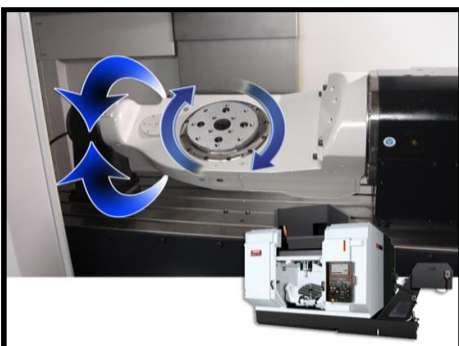
Cost: \$4,080

Location:

191 Fayette Street
Martinsville, VA 24112

PROGRAM OUTCOMES

At the completion of this course, students will be able to act as a high-performing team member, further their knowledge of CNC (Computer Numerical Control) manufacturing and keep current with the latest technology.



CONTACT INFORMATION

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MAZAK VRX-700

5-AXIS MACHINE INTERMEDIATE

Not-for credit course

PROGRAM INTEGRATION

This course gives the student the applicable technical skills to pursue their NIMS Level 2 certification, and or use as credit towards an engineering technology degree.

*NIMS

National Institute for Metalworking Skills

PROGRAM INFORMATION

This intermediate course picks up where the Mazak Machine Programming course left off. It will begin with two weeks of online machining training, and conclude with eight weeks of Mazatrol functions, program creation, and lab work.

Students will have the opportunity earn industry credentials through both performance and theory assessments. The performance will be the manufacturing of a part, the set-up and operation of a machine or the writing of a program that will manufacture a specific part.

Training Hours: 60

Duration: 10 Weeks

Credentials: NIMS Level 1

Cost: \$5,100

Location:

191 Fayette Street
Martinsville, VA 24112

PROGRAM OUTCOMES

At the completion of this course, students will have earned a NIMS Level 1 certification, which clearly demonstrates that they have met the industry benchmark for that competency. Metalworking companies use this type of credential as a basis for recruiting, hiring, placement and promotion.

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MACHINING SKILLS

CERTIFICATION PROGRAM

Not-for credit course

PROGRAM INTEGRATION

This course gives the student the applicable technical skills to pursue their NIMS Level 2 certification, and or use as credit towards an engineering technology degree.

*NIMS
National Institute for Metalworking
Skills

PROGRAM INFORMATION

This intermediate course will begin with 7 weeks of prerequisite knowledge training on-line, using the Skills 180 curriculum. It will cover Safety, Manufacturing, Quality, and *CNC Machining. The course will conclude with 11 weeks of hands-on machine training and lab work.

Students will have the opportunity to earn a total of 5 Level 1 *NIMS credentials through both performance and theory assessments in:

1. Measure Material Safety
2. Job Planning, Layout & Benchwork
3. NC Mill Operator
4. CNC Lathe Operator
5. Manual Mill Project

Training Hours: 414

Duration: 18 Weeks

Credentials: *NIMS Level 1

Cost: \$10,000

Location:

191 Fayette Street
Martinsville, VA 24112

PROGRAM OUTCOMES

At the completion of this course, students will have earned 5 NIMS Level 1 certifications, which clearly demonstrates that they have met the industry benchmark for that competency. Metalworking companies use these types of credentials as a basis for recruiting, hiring, placement and promotion.

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GD & T

GEOMETRIC DIMENSIONING & TOLERANCE

Not-for credit course

PROGRAM INTEGRATION

This stand-alone course will give students hands-on experience, and a solid foundation of GD&T knowledge that will increase their engineering drawing abilities, improve their technical skillset and advance their career. It is a great prerequisite for Precision Machining training, Metrology, and Solidworks courses.

PROGRAM INFORMATION

This course provides thorough coverage of GD&T practices, as established by the ASME Y14.5–2009 standard. From understanding symbols on existing drawings to calculating the tolerances for proper size and location of features, topics are introduced in a methodical manner to establish an understanding of basic concepts before building to more advanced applications.

Training Hours: 48

Duration: 6 Weeks

Credentials:

Certificate of Completion

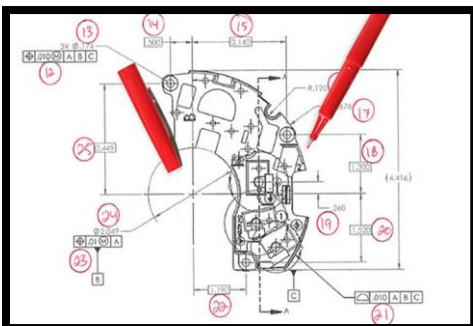
Cost: \$4,080

Location:

191 Fayette Street
Martinsville, VA 24112

PROGRAM OUTCOMES

At the completion of this course, students will be able to act as a high-performing team member with the ability to apply and communicate geometric tolerances clearly on their engineering drawings.



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METROLOGY BASICS

INTRODUCTION TO MEASUREMENT

Not-for credit course

PROGRAM INTEGRATION

Metrology basics is a great foundational course that will prepare students for Manual and Precision Machining training, GD & T (Geometric Dimensioning & Tolerance) as well as Metrology Lab Device training.

PROGRAM INFORMATION

This introductory course will introduce the students to the concepts of measurement systems, units, measurement uncertainty, measurement assurance, traceability, basic statistics and how they fit into the laboratory Quality Management System.

Topics will be covered using a variety of training styles including lecture, hands-on exercises, case studies, and discussion.

Training Hours: 48

Duration: 6 Weeks

Credentials:
Certificate of Completion

Cost: \$4,080

Location:
191 Fayette Street
Martinsville, VA 24112

PROGRAM OUTCOMES

At the completion of this course, students will have hands-on experience and the understanding of why measurement is so critical to the entire manufacturing engineering process. The skills and key concepts that students obtain from this course can be applied to any measurement discipline.



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METROLOGY LAB

DEVICES

PROGRAM INTEGRATION

Metrology Lab Devices is a great class to take after Metrology Basics. It will also prepare students for Manual and Precision Machining training, as well as the GD & T (Geometric Dimensioning & Tolerance) course.

PROGRAM INFORMATION

This intermediate course picks up where the Metrology Basics course left off. Students will receive extensive hands-on training with a focus on the programming and operation of six measuring devices:

1. CMM
2. Profile Projector
3. Roundness Tester
4. Height Gage
5. Surface Gage
6. Rockwell Hardness Tester

Training Hours: 48

Duration: 6 Weeks

Credentials:
Certificate of Completion

Cost: \$4,080

Location:
191 Fayette Street
Martinsville, VA 24112

PROGRAM OUTCOMES

At the completion of this course, students will have hands-on experience and the understanding of why measurement is so critical to the entire manufacturing engineering process. The skills and key concepts that students obtain from this course can be applied to any measurement discipline.



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SOLIDWORKS

BASICS

Not-for credit course

PROGRAM INTEGRATION

Solidworks Basics is a great foundational course and will prepare students to take CAD (Computer-Aided Design), Drafting, Solid Modeling and CNC Programming.

PROGRAM INFORMATION

This is an introduction to the engineering profession through the use of; Freehand sketching, lettering scales, use of instruments, layout drawings as well as an introduction to computer-aided design, drafting, and solid modeling.

Students will also receive extensive hands-on training, creating 3-D drawings and basic dimensioning.

Training Hours: 24

Duration: 6 Weeks

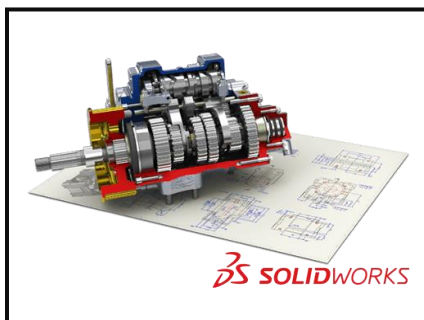
Credentials:
Certificate of Completion

Cost: \$2,040

Location:
191 Fayette Street
Martinsville, VA 24112

PROGRAM OUTCOMES

At the completion of this course, students will have the hands-on experience that bridges the gap between ideas and technology. SOLIDWORKS prepares students for rewarding engineering careers and gives them vital skills that employers demand across multiple industries.



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CAD

COMPUTER AIDED DESIGN

Not-for credit course

PROGRAM INTEGRATION

CAD (Computer Aided Design) is a great course to take alone, or in conjunction with CNC Programming and Precision Machining.

PROGRAM INFORMATION

This Computer Aided Design class picks up where the Solidworks Basics course left off. It uses both solid and surface modeling techniques.

At the end of this course students will have explored in depth one software package, SolidWorks, and will be conversant in:

- 2-Dimensional tools
- Solid modeling tools
- Surface modeling tools
- Measured drawings
- Computer aided rendering

Training Hours: 24

Duration: 6 Weeks

Credentials:
Certificate of Completion

Cost: \$2,040

Location:
191 Fayette Street
Martinsville, VA 24112

PROGRAM OUTCOMES

At the completion of this course, students will have the hands-on experience that bridges the gap between ideas and technology. CAD prepares students for rewarding engineering careers and gives them vital skills that employers demand across multiple industries.

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LEAN MANUFACTURING

SIX SIGMA YELLOW BELT CERTIFICATION

Not-for credit course

PROGRAM INTEGRATION

The Six Sigma Yellow Belt course is a great introduction into the continuous improvement methodology, and it also prepares students for more advanced certifications i.e. Six Sigma Green Belt and Black Belt programs.

PROGRAM INFORMATION

The Six Sigma Yellow Belt certification course, by definition, is an entry-level certification. This professional development course was designed to teach someone with little to no knowledge of Six Sigma, the basic skills needed to function as a Yellow Belt on a process improvement team.

Training Hours: 24

Duration: 6 Weeks

Credentials:
Yellow Belt Certification

Cost: \$2,040

Location:
191 Fayette Street
Martinsville, VA 24112

PROGRAM OUTCOMES

At the completion of this course, students will have the hands-on experience, and technical skills needed to facilitate lean problem solving and improvement efforts. Having a Six Sigma Yellow Belt certification allows students to develop an understanding of the different phases of a Six Sigma project, and how those phases improve the processes within their organization.



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APPRENTICESHIP PROGRAM

JP SUPERIOR SOLUTIONS

Not-for credit course

PROGRAM INTEGRATION

CAD (Computer Aided Design) is a great course to take alone, or in conjunction with CNC Programming and Precision Machining.

PROGRAM INFORMATION

JPSS is a custom full-service performance automotive center. They build and service vehicles that operate at Virginia International Raceway, high performance street cars, drag cars, and high-end specialty and exotic automobiles. In short, JPSS makes fast cars faster.

This customized apprenticeship program will cover a variety of courses in:

1. Machine Shop Manual & CNC Skills
2. CAD Software Operation
3. Welding
4. Engine Building
5. Automotive Electrical Systems
6. Automotive Suspension and Alignment

Training Hours: 414

Duration: 52 Weeks

Credentials: NIMS Level 1
MIG 3D Welding Certification TIG
3G Welding Certification

Cost: \$10,000

Location:

191 Fayette Street
Martinsville, VA 24112

PROGRAM OUTCOMES

At the completion of this program, students will have earned multiple NIMS Level 1 certifications, and MIG and TIG welding certifications, which clearly demonstrates that they have met the industry benchmark for those competencies. As a result, JPSS will have a well-trained and exceptionally skilled workforce.

CONTACT INFORMATION

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