



# **Progressive Learning Course Catalog**

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National Training and Learning Center





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# **Vision**

In competitive manufacturing, issues such as uptime, maximum utilization and workforce development are more critical than ever for the sustainability of business. At Mazak, we believe that when a customer purchases a machine, it is our responsibility to provide the support that ensures they receive the maximum return on their investment. Our new Optimum Plus North American customer support program provides the full range of services you need to make the most of your Mazak equipment. Whether focusing on profitability, productivity or competitive positioning, knowledge is power. Even with the latest user-friendly machine technologies, success correlates directly to the expertise of the programmers and operators working with the equipment. That's why Mazak has constantly made substantial investments in developing and refining our Progressing Learning program.

Mazak Progressive Learning represents a unique, phased approach to education and training, combining hands-on training, web-based instruction and real world examples to empower customers with the skills needed to get the most out of their investment. Our program offers tiers of offerings, ranging from self-paced coursework to high advanced Multi-Tasking User Groups. This ensures an appropriate entry point for any individual, regardless of their current level of skill and expertise.

Additionally, customers can receive training at a variety of locations. Classes are routinely offered at our Learning Center and Center for Multi-Tasking and Manufacturing Excellence in Florence, Kentucky. Each of our Regional Technology Centers also integrates our Progressive Learning approach and provides a host of training alternatives. We also make available customized, on-site training programs that can be held at your own facilities. By offering such a range of options, we ensure that every customer can be armed with the knowledge to optimize their production processes.

- Each new machine includes three years of programming training at no charge
- Classes held at the Learning Center and Center for Multi-Tasking and Manufacturing Excellence in Florence, Kentucky
- On-site training at our Regional Technology Centers located across North America
- Training staff with unmatched expertise and real-world experience

# **Introduction to Mazak Training**

The National Technology Center and Optimum Support Headquarters in Florence, Kentucky are the home of the National Training and Learning Centers. Annually, over 3,000 customers receive training in our state of the art facility. To ensure that we accommodate as many customers as possible with the highest quality, our facilities contain several generations of Mazatrol CNC simulators, numerous dedicated sub-assemblies, and test stands for a hands-on learning experience. Operator development and advanced programming classes are held in the Center for Multi-Tasking and Manufacturing Excellence in Florence, KY. In addition, seven Regional Technology Centers in the US, Canada, and Mexico provide programming courses for new machine installations. Specific requests can be made to train groups of maintenance personnel at the customer's facility. Additional classes are posted through-out the year. For up-to-date information, please visit our website at: [www.mazakusa.com/learning/](http://www.mazakusa.com/learning/).

Maintenance classes are prepared especially for Electro-Mechanical specialists and are taught by machine and control type. A strong technical curriculum offers the best opportunity to improve the knowledge and ability of your maintenance specialists and maximizes the productivity of your Mazak machines. The Advanced Electrical Troubleshooting classes on the Mazatrol controls go deeper into the Mazak troubleshooting. This class utilizes control ladder diagrams and diagnostic features; therefore, a Mechanical and Electrical Class is a prerequisite-site.

Classes run daily from 8:30 a.m. to 4:30 p.m. ending at 3:00 p.m. on the last day (unless indicated otherwise). The tuition fee covers professional instruction, class materials, manuals and daily lunches. Expenses for hotel, meals, entertainment, transportation, etc. are the student's responsibility. Preferred rates for car rental and hotel accommodations are available and details are provided upon registration inquiry. Hotels provide transportation to and from Mazak classes as well as airport shuttle service.

## **EXPERIENCE Matters**

Nothing fosters a true understanding of machine tools and the latest advancements in metal cutting like hands-on experience. By participating in Hands on Training (HOT) operator development courses at the Center for Multi-Tasking and Manufacturing Excellence, your workforce will gain invaluable expertise.

## **Get CONNECTed**

Though the completion of hands-on training will provide you with the expertise to ensure increased productivity and profitability in your shop, success will not be long lasting if steps are not taken to continue developing those skills. Through Mazak's online training program with ToolingU, you will not only learn the basics of machining technology, but also develop skills in areas such as shop math and CNC basic milling and turning, while increasing knowledge on topics like quality, materials and processes.

## **CHART** a Course

Our commitment to ensuring optimum equipment productivity extends to programming and maintenance training as well. Each year, thousands of Mazak customers receive training at the National Training Department in the Optimum Customer Service and Support Headquarters in Florence, Kentucky. To guarantee that we accommodate as many customers as possible, our facilities contain several generations of Mazatrol CNC simulators, numerous dedicated sub-assemblies and test stands for a hands-on learning experience.

## **EXPAND** Industry Knowledge

Having a strong grasp on best practices for multi-tasking machining is imperative for the success of your business, and the best source of this valuable information is your fellow multi-tasking users. Mazak created Multi-Tasking User Groups to provide an open forum to discuss the manufacturing strengths, opportunities and problems that many companies are facing in today's economic landscape. Meeting at least once per quarter at Mazak's Multi-Tasking and Manufacturing Learning Center in Florence, Kentucky, the group is comprised of Mazak customers who wish to expand and share their knowledge of multi-tasking, while also exploring individual initiatives and solutions for a wide variety of technical, educational and workforce issues.

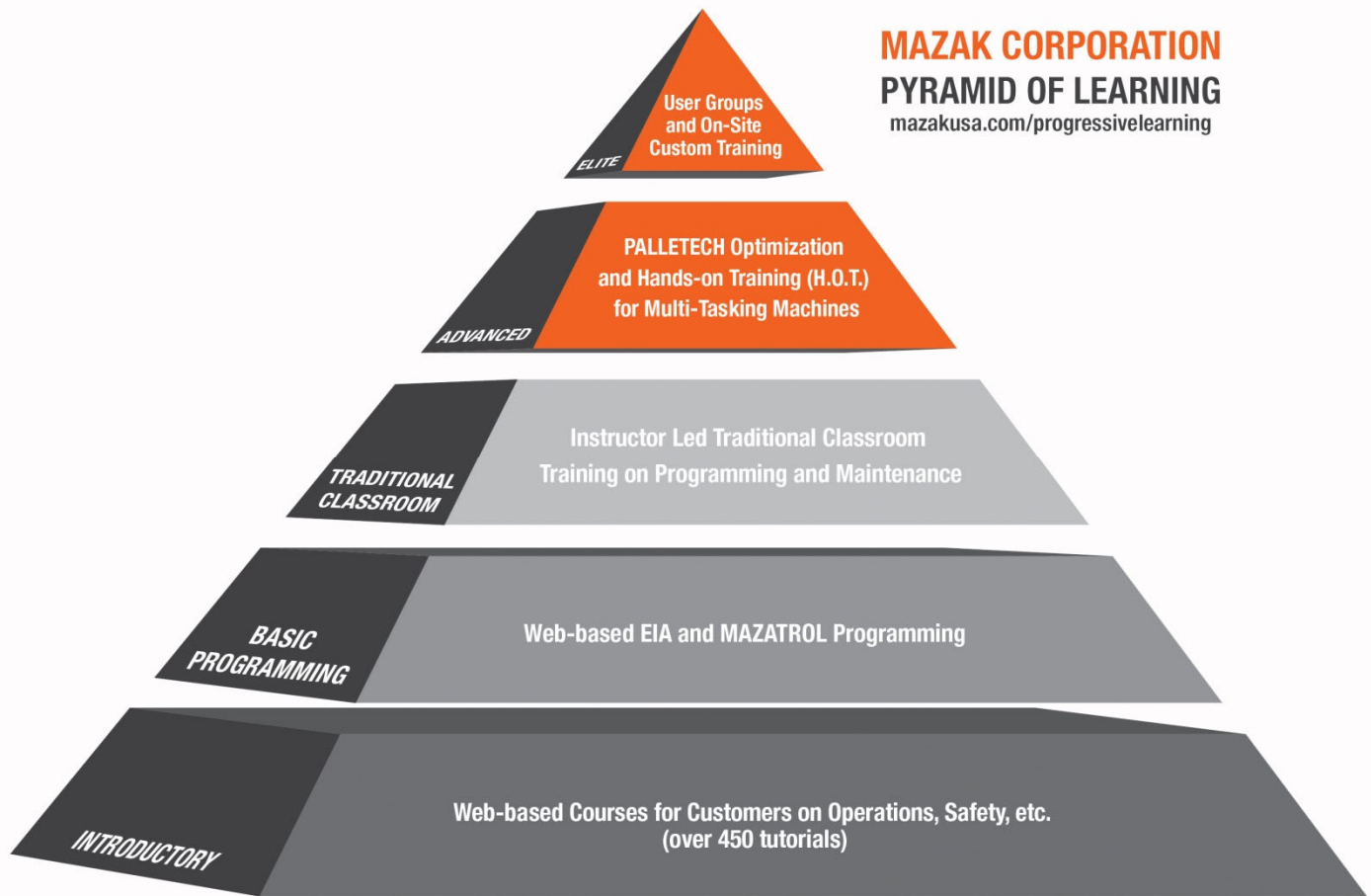
## Partnerships for **SUCCESS**

Mazak frequently hosts seminars that focus on the various trends and challenges in the manufacturing industry. By partnering with industry-leading tooling companies and suppliers, we are able to provide customers with a comprehensive learning experience that generate new ideas designed to fill the technology gap.



The Learning Center is used for customer training, user group training and large meetings.

**MAZAK CORPORATION**  
**PYRAMID OF LEARNING**  
[mazakusa.com/progressivelearning](http://mazakusa.com/progressivelearning)



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**Simple**

Self-Paced & Web-Based Training Programs

**Introduction**

Introduction to Conversational Programming and CNC Overview

**Traditional**

Hands-On Operation Development (Attendees Setup and Run Parts)

Courses include classroom training

**Advanced**

Tooling Technologies Seminars

Pallettech PMC Web Optimization

EIA/ISO, Renishaw Macro and Applied Conversational Programming

Special Processes (eg: gear cutting, 5 Axis)

**Elite**

Customized Training Programs

Machine User Groups / Special Technology Seminars



# Registration

Class reservations are on a first come-first serve basis and must be made in advance and confirmed with a purchase order.

To register via the internet, please visit us at: <http://www.mazakusa.com/learning>. From here you can click on the 'All Scheduled Classes' at the bottom right hand corner. Or you can select the 'POD Product Training' from the tool bar and select 'Classes' from the drop down.

The screenshot shows the Mazak OPTIMUMplus website. The top navigation bar includes links for Home, Regional Technology Center Network, National Service, Parts, Spindle and Unit Rebuild, POD Product Training, and Contact Us. The POD Product Training dropdown menu is open, showing options like About Training, Classes, Regional Maps, Instructors, Course Catalog, Request a Class, and Multi Tasking User Groups. The 'Classes' option is circled. On the left, a pyramid diagram illustrates the training levels: SIMPLE (Online, Web-based Training), INTRODUCTORY (Programming Classes, EIA and MAZATROL Web-based and/or Hands On Training), TRADITIONAL (Manufacturing Process Solutions, Hands On Training, Multi-Tasking), ADVANCED (PALLETECH Optimization, Advanced Classes on Solutions to Manufacturing Processes), and ELITE (Customized Training Programs). The 'All Scheduled Classes' link is circled in the bottom right corner.

Under 'Class Schedule' you can filter by date, location and training type. Select the 'Register' link to begin the registration process.

## Class Schedule

10/11/2012 - 11/30/2013

-All locations-

▼

Programming

▼

Search

Request a Class

View Catalog

Description	Class type	Location	Dates	Capacity	# Left	
Mazatrol Matrix Conversational for Machining Centers	Programming	Windsor Locks, CT	10/15 - 10/19/2012	8	0	<a href="#">Join waiting list</a>
Mazatrol Matrix & MPro for all Integrex-e, i & j Series	Programming	Florence, KY #4) South bldg.	10/15 - 10/19/2012	6	0	<a href="#">Join waiting list</a>
Introduction to Mazatrol Matrix/Smart CNC Conversational Programming for Turning/Turning with Milling & Hyperquadrex	Programming	Florence, KY #4) South bldg.	10/15 - 10/19/2012	6	1	<a href="#">Register</a>
Mazatrol Matrix & MPro for all Integrex-e, i & j Series	Programming	Houston, TX	10/15 - 10/19/2012	10	6	<a href="#">Register</a>
Mazatrol Matrix Conversational for Turning Centers	Programming	Suwanee, GA	10/16 - 10/19/2012	10	3	<a href="#">Register</a>
Mazatrol Matrix & Smart Conversational for Machining Centers	Programming	Milpitas, CA	10/16 - 10/19/2012	4	0	<a href="#">Join waiting list</a>
Introduction to Mazatrol Matrix/Smart CNC Conversational Programming for Turning/Turning with Milling & Hyperquadrex	Programming	Schaumburg, IL	10/22 - 10/25/2012	10	0	<a href="#">Join waiting list</a>
Introduction to Mazatrol Matrix Conversational for Integrex 100-400 IV	Programming	Florence, KY #4) South bldg.	10/22 - 10/26/2012	6	4	<a href="#">Register</a>
Mazatrol Matrix & Smart Conversational for Machining	Programming	Gardens, CA	10/23 - 10/26/2012	6	2	

To submit a registration request via fax, send it to the National Learning and Training Center at 859-342-1520.

# Course Description

## Color Code Definitions:

### Programming

- The header for all Programming courses will be the color orange

### Maintenance

- The header for all Maintenance courses will be the color blue

### HOT Class

- The header for all HOT (Hands on Training) will be the color red

KY Technology Center Maintenance



Mazak Technology Centers Classrooms



KY Technology Center Hands On Training



**Course Title:** Mazatrol Fusion 640M, M-Plus, M-32 Conversational Programming for Machining  
(Training is 4 days)

**Location:** National Training Center, Florence, KY – East Building Lobby 3

### Brief Overview:

The purpose of this class is to provide part programming information to experienced milling machinist using the Mazatrol programming language on Mazak machining centers.

The classroom uses Fusion 640M Control Simulators.

The class hours are 8:30AM–4:30PM daily (3days) ending an approximately 3:00PM the 4<sup>th</sup> day.

### Requirements:

Machining and tooling experience on machining centers.

### Category:

Machining

### Tuition: \$750.00

After purchase of new machine customer will have 3 years of no charge on programming courses.

### Note:

This class covers 640M, M-Plus and M32 Controls.

Lunch will be provided.

### Abbreviated Syllabus:

#### Day 1

Machine coordinate and programming coordinate systems; Familiarization with Mazatrol functions and program creation; Common Unit and basic WPC; Explanation of the Face Milling Unit and Point Machining Units

#### Day 2

Explanations of the following: Mazatrol Program edit features, Priority Function for the Same Tool; Multi Mode Programming; Line Machining; Tool Data; Virtual Machining

#### Day 3

Explanations of the following: End Unit, Step Unit, Arbitrary shapes with unknowns, Arbitrary shapes using shape rotates and shape shift features

#### Day 4

MMS Unit; Tornado Milling Unit and Planet Tapping Unit: User Parameters and TPC function; Restart, VFC, TPS functions; Factory Tour and National Technology Center Tour

**Course Title:** Mazatrol Matrix Programming for **Location:** National Training Center,  
Integrex-e, i & j Series Florence, KY – East Building Lobby 3  
(Training is 5 days)

**Brief Overview:**

This class provides part programming information using the Mazatrol programming language on Mazak Integrex.

The class room uses the Matrix CAM.

The class hours for Integrex Turning section are 8:30AM - 4:30PM daily. Friday will end at noon.

**Requirements:**

Machining and tooling experience on lathes and/or machining centers.

**Category:**

Integrex e, i & j Series

**Tuition:** \$750.00

After purchase of new machine customer will have 3 years of no charge on programming courses.

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine coordinate and programming coordinate systems; Tool Data, Parameters, TPC; Familiarization with Mazatrol functions and program creation; Topics on Turning: Facing, Bar Out, Unknowns Calculating, Tool Data, Drilling, Bar

Day 2

Continue with topics on Turning: Threading, Tapping, Grooving, Bar Out, Copy, Material Shape, Unknowns Calculating (continued), Bar Face and Bar Back

Day 3

Manual Programming for Turning; Secondary Spindle Programming; C-axis topics

Day 4

Topics on Milling: C-axis Coordinate, Point Machining, Line Machining, Arbitrary Shapes, Manual Programming for Milling, Y-axis Coordinate, Facing

Day 5

Topics on Milling (continued): Y-axis Coordinate, Line Machining, Point Machining, Pocket, Manual Programming with Y-axis, Shape Rotate and Shape Shift Features, Tornado Milling and Planet Tapping; B-axis topics

Course is also offered as an  
Online Course.

**Course Title:** Mazatrol Fusion 640MT/MT-Pro **Location:** National Training Center,  
Conversational Programming for Integrex Florence, KY – East Building Lobby 3  
100 – 400  
(Training is 5 days)

**Brief Overview:**

This class provides part programming information using the Mazatrol programming language on Mazak Integrex.

The classroom uses the Mazatrol 640MT/MT Pro Simulators.

The class hours for Integrex Turning section are 8:30AM – 4:30PM daily (2days) ending at approximately noon the 3<sup>rd</sup> day. Secondary spindles and the Milling sections for C-axis end at 4:30PM on the 4th day. Y-axis and B-axis start at 8:30 AM - 4:30PM on the 5th day.

**Requirements:**

Machining and tooling experience on lathes and/or machining centers.

**Category:**

Multi-Tasking (Integrex)

**Tuition:** \$750.00

After purchase of new machine customer will have 3 years of no charge on programming courses.

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine coordinate and programming coordinate systems; Familiarization with Mazatrol functions and program creation; Topics on Turning: Facing, Bar Out, Explanation of Unknowns, Tool Data, Drilling, Bar

Day 2

Topics on Turning (continued): Threading, Tapping, Grooving, Bar Out, Copy, Material Shape, Continuation of Unknown Calculations, Bar Face and Bar Back, Continuation of Tool Data

Day 3

MMS; Manual Programming; User Parameters and TPC function; Factory Tour; Secondary Spindle Programming

Day 4

C-axis coordinate; Point Machining; C-axis Slot Machining; Milling User Parameters; Line machining; Arbitrary Shapes; Manual Programming with C-axis

Day 5

Y-axis; Face Milling; Line Machining; Point Machining; Pocket; Arbitrary Shapes; Manual Programming with Y-axis; Shape Rotate and Shape Shift; Tornado Milling, B-axis information

**Course Title:** Mazatrol Fusion 640T, T-Plus, T-32 Turning & Turning with Milling Conversational Programming (Training is 5 days) **Location:** National Training Center, Florence, KY – East Building Lobby 3

**Brief Overview:**

This class provides part programming information on Mazak Lathes and Mill center Lathes using the Mazatrol programming language.

The class room uses Fusion 640T Control Simulators.

The class hours on the Turning section for Lathes and Millcenter Lathes are 8:30AM - 4:30PM daily (2days) ending at approximately 2:30PM the 3<sup>rd</sup> day. Secondary spindle continues to 4:30PM. The Milling section for Mill center Lathes starts 4<sup>th</sup> day for C-axis to 3:00PM. The Y-axis then starts and continues to the 5<sup>th</sup> day.

**Requirements:**

Machining and tooling experience on lathes and/or machining centers.

**Category:**

Turning with Milling

**Tuition:** \$750.00

After purchase of new machine customer will have 3 years of no charge on programming courses.

**Note:**

This class covers Fusion 640T, T-Plus, and T32 controls.

Lunch will be provided.

**Abbreviated Syllabus:**

**Day 1**

Machine coordinate and programming coordinate systems; Familiarization with Mazatrol functions and program creation; Topics on Turning: Edge, Bar Out, Explanation of Unknowns, Tool Data, Edit Features, Drilling, Bar In

**Day 2**

Topics on Turning (continued): Threading, Tapping, Program Layout Functions, Groove, Copy, Material Shape, Unknowns Calculation, Bar Face and Bar Back, Tool Data

**Day 3**

MMS; User Parameters and TPC function; Factory Tour; Secondary Spindle Programming

**Day 4**

Topics on Milling: Mill center Lathes, Tool Data, C-axis coordinate, C-Axis Drilling and Tapping, C-axis Bore, C-axis Mill Groove, User Parameters, C-axis Line Machining, Manual Programming, Y-axis Coordinate, Y-axis Drilling and Tapping

**Day 5**

Topics on Milling (continued): Y-axis Line Machining, Y-axis Circle Milling and Tornado Milling, Y-axis Mill Groove, Manual Programming

**Course Title:** Mazatrol Matrix / Fusion  
640T Conversational Programming for  
Machining Centers  
(Training is 5 days)

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3

**Brief Overview:**

This class provides part programming information on Mazak Lathes and Mill center Lathes using the Mazatrol programming language.

The class room uses Fusion 640T Control Simulators.

The class hours are 8:30AM - 4:30PM daily (4 days) ending at approximately 2:30PM the 5<sup>th</sup> day.

**Requirements:**

Machining and tooling experience on lathes and/or machining centers.

**Category:**

Machining Center

**Tuition:** \$750.00

After purchase of new machine customer will have 3 years of no charge on programming courses.

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine coordinate and programming coordinate systems; Familiarization with Mazatrol functions and program creation; Topics on Turning: Edge, Bar Out, Explanation of Unknowns, Tool Data, Edit Features, Drilling, Bar In

Day 2

Topics on Turning (continued): Threading, Tapping, Program Layout Functions, Groove, Copy, Material Shape, Unknowns Calculation, Bar Face and Bar Back, Tool Data

Day 3

User Parameters and TPC function; Factory Tour; Secondary Spindle Programming

Day 4

Topics on Milling: Mill center Lathes, Tool Data, C-axis coordinate, C-Axis Drilling and Tapping, C-axis Bore, C-axis Mill Groove, User Parameters, C-axis Line Machining, Manual Programming, Y-axis Coordinate, Y-axis Drilling and Tapping

Day 5

Topics on Milling (continued): Y-axis Line Machining, Y-axis Circle Milling and Tornado Milling, Y-axis Mill Groove, Manual Programming



**Course Title:** Mazatrol Matrix & Smart  
Conversational Programming for Machining  
Centers  
(Training is 4 days)

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3  
(*ALL TECHN. CENTERS; go to  
MazakUSA.com to find location near you*)

**Brief Overview:**

The purpose of this class is to provide part programming information using the Mazatrol programming language on Mazak Machining Centers.

The class room uses the Matrix Cam.

The class hours are 8:30AM - 4:30PM daily (3days) ending at approximately 3:00PM the 4<sup>th</sup> day.

**Requirements:**

Machining and tooling experience on machining centers.

**Category:**

Machining

**Tuition:** \$750.00

After purchase of new machine customer will have 3 years of no charge on programming courses.

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine coordinate and programming coordinate systems; Familiarization with Mazatrol functions and program creation; Face Milling; Point Machining, Tool Data, Parameters, WPC

Day 2

Program Edit Features; Priority Function for the Same Tool; Multi Mode Programming Function; Topics on Machining: Line Machining, WPC, Pocket, Slot

Day 3

Topics on Machining (continued): M Codes, Sub programs, Pallet Change, Index, Pocket Mountain, Pocket Valley, Unknowns Calculating, Shape Rotate and Shape Shift

Day 4

MMS; Tornado Milling and Planet Tapping; Parameters and TPC Functions; Factory Tour



**Course Title:** Mazatrol Matrix Conversational  
Programming for Machining Centers  
(Training is 4 days)

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3  
(*ALL TECHN. CENTERS; go to  
MazakUSA.com to find location near you*)

**Brief Overview:**

The purpose of this class is to provide part programming information using the Mazatrol programming language on Mazak Machining Centers.

The class room uses the Matrix Cam.

The class hours are 8:30AM - 4:30PM daily (3days) ending at approximately 3:00PM the 4<sup>th</sup> day.

**Requirements:**

Machining and tooling experience on machining centers.

**Category:**

Machining

**Tuition:** \$750.00

After purchase of new machine customer will have 3 years of no charge on programming courses.

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine coordinate and programming coordinate systems; Familiarization with Mazatrol functions and program creation; Face Milling; Point Machining, Tool Data, Parameters, WPC

Day 2

Program Edit Features; Priority Function for the Same Tool; Multi Mode Programming Function; Topics on Machining: Line Machining, Tool Data, WPC, Pocket, Slot

Day 3

Topics on Machining (continued): M Codes, Sub programs, Pallet Change, Index, Pocket Mountain, Pocket Valley, Unknowns Calculating, Shape Rotate and Shape Shift

Day 4

Tornado Milling and Planet Tapping; Parameters and TPC Functions; Factory Tour

Course is also offered as an  
Online Course.

**Course Title:** Mazatrol Matrix & MPro  
Programming for Integrex e-Series  
(Training is 5 days)

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3

**Brief Overview:**

This class provides part programming information using the Mazatrol programming language on Mazak Integrex.

The class room uses the Matrix CAM.

The class hours for Integrex Turning section are 8:30AM - 4:30PM daily (2days) ending at approximately noon the 3<sup>rd</sup> day. Secondary spindle and then the Milling sections continue on to the 4<sup>th</sup> day for C-axis and Y-axis. The 5<sup>th</sup> day includes Y-axis and B-axis Milling.

**Requirements:**

Machining and tooling experience on lathes and/or machining centers.

**Category:**

Integrex e Series

**Tuition:** \$750.00

After purchase of new machine customer will have 3 years of no charge on programming courses.

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine coordinate and programming coordinate systems; Familiarization with Mazatrol functions and program creation; Topics on Turning: Facing, Bar Out, Unknowns Calculating, Tool Data, Drilling, Bar

Day 2

Continue with topics on Turning: Threading, Tapping, Grooving, Bar Out, Copy, Material Shape, Unknowns Calculating (continued), Bar Face and Bar Back, Tool Data

Day 3

MMS; Manual Programming for Turning; User Parameters and TPC function; Student Review; Secondary Spindle Programming; C-axis topics

Day 4

Topics on Milling: C-axis Coordinate, Point Machining, Line Machining, Parameters and TPC function, Arbitrary Shapes, Manual Programming for Milling, Y-axis Coordinate, Facing

Day 5

Topics on Milling (continued): Y-axis Coordinate, Line Machining, Point Machining, Pocket, Manual Programming with Y-axis, Shape Rotate and Shape Shift Features, Tornado Milling and Planet Tapping; B-axis topics

**Course Title:** Mazatrol Matrix & Smart Conversational Programming for Turning, Turning with Milling, and Hyperquadrex (Training is 5 days)

**Location:** National Training Center, Florence, KY – East Building Lobby 3 (ALL TECHN. CENTERS; go to [MazakUSA.com](http://MazakUSA.com) to find location near you)

**Brief Overview:**

The purpose of this class is to provide part programming information using the Mazatrol programming language on Mazak Lathes and Mill center Lathes.

The class room uses the Matrix Cam.

The class hours for the Turning section for all Lathes and Mill center Lathes are 8:30AM - 4:30PM daily (2days) ending at approximately 2:30PM the 3<sup>rd</sup> day secondary spindle continues to 4:30PM. The Milling section for Mill center Lathes continues a 4<sup>th</sup> day for C-axis and a 5<sup>th</sup> day for Y-axis the hours both days are 8:30AM - 4:30PM.

**Requirements:**

Machining and tooling experience on lathes and/or machining centers.

**Category:**

Turning with Milling

**Tuition:** \$750.00

After purchase of new machine customer will have 3 years of no charge on programming courses.

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine coordinate and programming coordinate systems; Familiarization with Mazatrol functions and program creation; Topics on Turning: Facing, Bar Out, Unknowns Calculating, Tool Data, Drilling, Bar In, Tool Data, Parameters

Day 2

Topics on Turning (continued): Threading, Tapping, Groove, Bar Out, Copy, Material Shape, Unknowns Calculating (continued), Bar Face, Bar Back, Tool Data (continued)

Day 3

Manual Programming; Parameters and TPC Functions; Factory Tour; Secondary Spindle Programming

Day 4

Topics on Milling: C-Axis Coordinate, Point Machining, Line Machining, TPC Functions, Arbitrary Shapes, Manual Programming

Day 5

Topics on Milling (continued): Y-Axis Coordinate, Face Milling, Line Machining, Point Machining, Pocket, Manual Programming, Tornado Milling and Planet Tapping

**Brief Overview:**

This class provides part programming information using the Mazatrol programming language on Mazak Integrex IV.

The class room uses the Matrix CAM.

The class hours for Integrex Turning sections are 8:30AM - 4:30PM daily. Turning sections are covered on the first three days. Secondary spindle begins on the third day as does Milling. Milling continues on covering C-axis and Y-axis. The class ends on Day 5 covering the B-axis.

**Requirements:**

Machining and tooling experience on lathes and/or machining centers.

**Category:**

Multi-tasking (Integrex)

**Tuition:** \$750.00

After purchase of new machine customer will have 3 years of no charge on programming courses.

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

**Day 1**

Machine coordinate and programming coordinate systems; Familiarization with Mazatrol functions and program creation; Topics on Turning: Facing, Bar Out, Unknowns Calculating, Tool Data, Drilling, Bar

**Day 2**

Topics on Turning (continued): Threading, Tapping, Grooving, Bar Out, Copy, Material Shape, Unknowns Calculating (continued), Bar Face and Bar Back, Tool Data (continued)

**Day 3**

MMS; Manual Programming for Turning; User Parameters and TPC function; Restart VFC, TPS functions; Student Review; Secondary Spindle Programming

**Day 4**

Topics on Milling: Tool Data, C-axis Coordinate, Point Machining, Line Machining, Parameters and TPC function, Arbitrary Shapes, Manual Programming for Milling

**Day 5**

Topics on Milling (continued): Y-axis Coordinate, Facing, Line Machining, Point Machining, Pocket, Manual Programming with Y-axis, Shape Rotate and Shape Shift Features, Tornado Milling and Planet Tapping, B-axis topics

**Course Title:** Mazatrol Matrix Conversational Programming for Turning, Turning with Milling, and Hyperquadrex (Training is 5 days)

**Location:** National Training Center, Florence, KY – East Building Lobby 3 (ALL TECHN. CENTERS; go to [MazakUSA.com](http://MazakUSA.com) to find location near you)

**Brief Overview:**

The purpose of this class is to provide part programming information using the Mazatrol programming language on Mazak Lathes and Mill center Lathes.

The class room uses the Matrix Cam.

The class hours for the Turning section for all Lathes and Mill center Lathes are 8:30AM - 4:30PM daily (2days) ending at approximately 2:30PM the 3<sup>rd</sup> day secondary spindle continues to 4:30PM. The Milling section for Mill center Lathes continues a 4<sup>th</sup> day for C-axis and a 5<sup>th</sup> day for Y-axis the hours both days are 8:30AM - 4:30PM.

**Requirements:**

Machining and tooling experience on lathes and/or machining centers.

**Category:**

Turning with Milling

**Tuition:** \$750.00

After purchase of new machine customer will have 3 years of no charge on programming courses.

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine coordinate and programming coordinate systems; Familiarization with Mazatrol functions and program creation; Topics on Turning: Facing, Bar Out, Unknowns Calculating, Tool Data, Drilling, Bar In

Day 2

Topics on Turning (continued): Threading, Tapping, Groove, Bar Out, Copy, Material Shape, Unknowns Calculating (continued), Bar Face, Bar Back, Tool Data (continued)

Day 3

MMS; Manual Programming; Parameters and TPC Functions; Factory Tour; Secondary Spindle Programming

Day 4

Topics on Milling: Tool Data, C-Axis Coordinate, Point Machining, Line Machining, Parameters and TPC Functions, Arbitrary Shapes, Manual Programming

Day 5

Topics on Milling (continued): Y-Axis Coordinate, Face Milling, Line Machining, Point Machining, Pocket, Manual Programming, Tornado Milling and Planet Tapping

Course is also offered as an  
Online Course.

**Course Title:** Mazatrol Matrix / SmoothG  
Programming for Turning, Turning with  
Milling  
(Training is 5 days)

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3  
(*ALL TECHN. CENTERS; go to  
MazakUSA.com to find location near you*)

**Brief Overview:**

The purpose of this class is to provide part programming information using the Mazatrol programming language on Mazak Lathes and Mill Center Lathes.

The class room uses the Matrix and Smooth Cam.

The class hours for the Turning section for all Lathes and Mill Center Lathes are 8:30AM - 4:30PM daily (2days) ending at approximately 2:30PM the 3<sup>rd</sup> day secondary spindle continues to 4:30PM. The Milling section for Mill Center Lathes continues a 4<sup>th</sup> day for C-axis and a 5<sup>th</sup> day for Y-axis the hours both days are 8:30AM - 4:30PM.

**Requirements:**

Machining and tooling experience on lathes and/or machining centers.

**Category:**

Turning with Milling

**Tuition:** \$750.00

After purchase of new machine customer will have 3 years of no charge on programming courses.

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine coordinate and programming coordinate systems; Familiarization with Mazatrol functions and program creation; Topics on Turning: Bar Out, Unknowns Calculating, Tool Data, Drilling, Bar In

Day 2

Topics on Turning (continued): Threading, Tapping, Bar Out, Copy, Material Shape, Unknowns Calculating (continued), Bar Face, Bar Back, Tool Data (continued), End Unit, Z Offset, Chuck Jaws

Day 3

MMS; Manual Programming; Parameters, TPC, VFC and TPS Functions; Factory Tour; Secondary Spindle Programming

Day 4

Topics on Milling: Tool Data, C-Axis Coordinate, Point Machining, Line Machining, Parameters and TPC Functions, Arbitrary Shapes, Manual Programming, Y Axis Introduction

Day 5

Topics on Milling (continued): Y-Axis Coordinate, Line Machining, Point Machining, Pocket, Manual Programming, Tornado Milling and Planet Tapping, Mill-Drilling, Tapping and Bore Units

Course is also offered as an  
Online Course.

**Course Title:** Pallettech PMC Web Scheduling  
(Training is 1 1/2 days)

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3

**Brief Overview:**

This hands on class provides training in Pallettech PMC Web manufacturing cell operation and scheduling on a horizontal machining center

The class hours are 1<sup>st</sup> day 8:30AM–4:30PM and 2<sup>nd</sup> day leave at noon.

**Requirements:**

Basic knowledge of CNC operation

**Category:**

Machining

**Tuition:** No Charge

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Safety; Introduction to System Configuration; Overview of PMC Web Cell operation; PMC Web screens for operation and scheduling

Day 2

Creating a part schedule; Starting and stopping system operation; Manual pallet transport; Creating Utilization Result Report

Day 3

Modifying part schedule; Practice

**Course Title:** QT Smart Conversational  
Programming for Turning with Milling  
(Training is 5 days)

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3  
(*ALL TECHN. CENTERS; go to  
MazakUSA.com to find location near you*)

**Brief Overview:**

The purpose of this class is to provide part programming information using the Mazatrol programming language on Mazak Lathes and Mill center Lathes.

The class room uses the Matrix Cam.

The class hours for the Turning section for all Lathes and Mill center Lathes are 8:30AM - 4:30PM daily (2days) ending at approximately 2:30PM the 3<sup>rd</sup> day secondary spindle continues to 4:30PM. The Milling section for Mill center Lathes continues a 4<sup>th</sup> day for C-axis and a 5<sup>th</sup> day for Y-axis the hours both days are 8:30AM - 4:30PM.

**Requirements:**

Machining and tooling experience on lathes and/or machining centers.

**Category:**

Turning with Milling

**Tuition:** \$750.00

After purchase of new machine customer will have 3 years of no charge on programming courses.

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine coordinate and programming coordinate systems; Familiarization with Mazatrol functions and program creation; Topics on Turning: Facing, Bar Out, Unknowns Calculating, Tool Data, Drilling, Bar In

Day 2

Topics on Turning (continued): Threading, Tapping, Groove, Bar Out, Copy, Material Shape, Unknowns Calculating (continued), Bar Face, Bar Back, Tool Data (continued)

Day 3

MMS; Manual Programming; Parameters and TPC Functions; Factory Tour; Secondary Spindle Programming

Day 4

Topics on Milling: Tool Data, C-Axis Coordinate, Point Machining, Line Machining, Parameters and TPC Functions, Arbitrary Shapes, Manual Programming

Day 5

Topics on Milling (continued): Y-Axis Coordinate, Face Milling, Line Machining, Point Machining, Pocket, Manual Programming, Tornado Milling and Planet Tapping



**Course Title:** SmoothG Conversational  
Programming Hyperquadrex  
(Training is 5 days)

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3  
(*ALL TECHN. CENTERS; go to  
MazakUSA.com to find location near you*)

**Brief Overview:**

The purpose of this class is to provide part programming information using the Mazatrol programming language on Mazak Lathes and Mill Center Lathes.

The class room uses the Matrix and Smooth Cam.

The class hours for the Turning section for all Lathes and Mill Center Lathes are 8:30AM - 4:30PM daily (2days) ending at approximately 2:30PM the 3<sup>rd</sup> day secondary spindle continues to 4:30PM. The Milling section for Mill Center Lathes continues a 4<sup>th</sup> day for C-axis and a 5<sup>th</sup> day for Y-axis the hours both days are 8:30AM - 4:30PM.

**Requirements:**

Machining and tooling experience on lathes and/or machining centers.

**Category:**

Turning

**Tuition:** \$750.00

After purchase of new machine customer will have 3 years of no charge on programming courses.

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine coordinate and programming coordinate systems; Familiarization with Mazatrol functions and program creation; Topics on Turning: Bar Out, Unknowns Calculating, Tool Data, Drilling, Bar In

Day 2

Topics on Turning (continued): Threading, Tapping, Bar Out, Copy, Material Shape, Unknowns Calculating (continued), Bar Face, Bar Back, Tool Data (continued), End Unit, Z Offset, Chuck Jaws

Day 3

MMS; Manual Programming; Parameters, TPC, VFC and TPS Functions; Factory Tour; Secondary Spindle Programming

Day 4

Topics on Milling: Tool Data, C-Axis Coordinate, Point Machining, Line Machining, Parameters and TPC Functions, Arbitrary Shapes, Manual Programming, Y Axis Introduction

Day 5

Topics on Milling (continued): Y-Axis Coordinate, Line Machining, Point Machining, Pocket, Manual Programming, Tornado Milling and Planet Tapping, Mill-Drilling, Tapping and Bore Units

**Course Title:** SmoothG Conversational Programming for Turning, Turning with Milling, and Hyperquadrex (Training is 5 days)

**Location:** National Training Center, Florence, KY – East Building Lobby 3 (ALL TECHN. CENTERS; go to *MazakUSA.com* to find location near you)

**Brief Overview:**

The purpose of this class is to provide part programming information using the Mazatrol programming language on Mazak Lathes and Mill Center Lathes.

The class room uses the Matrix and Smooth Cam.

The class hours for the Turning section for all Lathes and Mill Center Lathes are 8:30AM - 4:30PM daily (2days) ending at approximately 2:30PM the 3<sup>rd</sup> day secondary spindle continues to 4:30PM. The Milling section for Mill Center Lathes continues a 4<sup>th</sup> day for C-axis and a 5<sup>th</sup> day for Y-axis the hours both days are 8:30AM - 4:30PM.

**Requirements:**

Machining and tooling experience on lathes and/or machining centers.

**Category:**

Turning with Milling

**Tuition:** \$750.00

After purchase of new machine customer will have 3 years of no charge on programming courses.

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine coordinate and programming coordinate systems; Familiarization with Mazatrol functions and program creation; Topics on Turning: Bar Out, Unknowns Calculating, Tool Data, Drilling, Bar In

Day 2

Topics on Turning (continued): Threading, Tapping, Bar Out, Copy, Material Shape, Unknowns Calculating (continued), Bar Face, Bar Back, Tool Data (continued), End Unit, Z Offset, Chuck Jaws

Day 3

MMS; Manual Programming; Parameters, TPC, VFC and TPS Functions; Factory Tour; Secondary Spindle Programming

Day 4

Topics on Milling: Tool Data, C-Axis Coordinate, Point Machining, Line Machining, Parameters and TPC Functions, Arbitrary Shapes, Manual Programming, Y Axis Introduction

Day 5

Topics on Milling (continued): Y-Axis Coordinate, Line Machining, Point Machining, Pocket, Manual Programming, Tornado Milling and Planet Tapping, Mill-Drilling, Tapping and Bore Units

**Course Title:** SmoothG / SmoothX /SmoothEz  
**Conversational Programming for Machining  
Centers**  
**(Training is 4 days)**

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3  
**(ALL TECHN. CENTERS; go to  
MazakUSA.com to find location near you)**

**Brief Overview:**

The purpose of this class is to provide part programming information using the Mazatrol programming language on Mazak Lathes and Mill Center Lathes.

The class room uses the Smooth Cam.

The class hours for the Turning section for all Lathes and Mill Center Lathes are 8:30AM - 4:30PM daily (3 days) ending at approximately 3:00PM the 4<sup>th</sup> day.

**Requirements:**

Machining and tooling experience on lathes and/or machining centers.

**Category:**

Machining

**Tuition:** \$750.00

After purchase of new machine customer will have 3 years of no charge on programming courses.

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

**Day 1**

Machine and programming coordinate systems, Program File Screen, Common Unit, WPC, Face Milling, Tool File, Basic Shapes, Shape and Tool Path Graphics

**Day 2**

Topics: Edit Features, Same Tool, Multi-Mode, Line Machining, Tool Data and Tool File, WPC, Virtual Machining, Machine Simulation, Arbitrary Shapes

**Day 3**

Units Explained: end, M Code, Subprogram, Pallet Change, Index, Step, Pocket Mountain and Pocket Valley; Process Control and Program Layout screens; Unknowns Calculating; Shape Rotate and Shape Shift

**Day 4**

MMS; Tornado Milling; Planet Tapping; Parameters, TPC, VFC and TPS Explained; Factory Tour

Course is also offered as an  
Online Course.

**Course Title:** SmoothX Conversational  
Programming for Integrex e & i Machines  
(Training is 5 days)

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3  
(*ALL TECHN. CENTERS; go to  
MazakUSA.com to find location near you*)

**Brief Overview:**

The purpose of this class is to provide part programming information using the Mazatrol programming language on Mazak Lathes and Mill Center Lathes.

The class room uses the Smooth Cam.

The class hours for the Turning section for all Lathes and Mill Center Lathes are 8:30AM - 4:30PM daily (2days) ending at approximately 2:30PM the 3<sup>rd</sup> day secondary spindle continues to 4:30PM. The Milling section for Mill Center Lathes continues a 4<sup>th</sup> day for C-axis and a 5<sup>th</sup> day for Y-axis the hours both days are 8:30AM - 4:30PM.

**Requirements:**

Machining and tooling experience on lathes and/or machining centers.

**Category:**

Integrex e & i

**Tuition:** \$750.00

After purchase of new machine customer will have 3 years of no charge on programming courses.

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine coordinate and programming coordinate systems; Familiarization with Mazatrol functions and program creation; Topics on Turning: Facing, Bar Out, Unknowns Calculating, Tool Data, Drilling, Bar In

Day 2

Topics on Turning (continued): Threading, Tapping, Groove, Bar Out, Copy, Material Shape, Unknowns Calculating (continued), Bar Face, Bar Back, Tool Data (continued), Setup, Priority Function, Virtual Machining

Day 3

MMS; Manual Programming; Parameters and TPC Functions; Factory Tour; Secondary Spindle Programming

Day 4

Topics on Milling: Tool Data, C-Axis Coordinate, Point Machining, Line Machining, Parameters and TPC Functions, Arbitrary Shapes, Manual Programming

Day 5

Topics on Milling (continued): Y-Axis Coordinate, Face Milling, Line Machining, Point Machining, Pocket, Manual Programming, Tornado Milling and Planet Tapping, Arbitrary Shapes

Course is also offered as an  
Online Course.

**Course Title:** SmoothAi Conversational  
Programming for Integrex e & i Machines  
(Training is 5 days)

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3  
(*ALL TECHN. CENTERS; go to  
MazakUSA.com to find location near you*)

**Brief Overview:**

The purpose of this class is to provide part programming information using the Mazatrol programming language on Mazak Lathes and Mill Center Lathes.

The class room uses the Smooth Cam.

The class hours for the Turning section for all Lathes and Mill Center Lathes are 8:30AM - 4:30PM daily (2days) ending at approximately 2:30PM the 3<sup>rd</sup> day secondary spindle continues to 4:30PM. The Milling section for Mill Center Lathes continues a 4<sup>th</sup> day for C-axis and a 5<sup>th</sup> day for Y-axis the hours both days are 8:30AM - 4:30PM.

**Requirements:**

Machining and tooling experience on lathes and/or machining centers.

**Category:**

Integrex e & i

**Tuition:** \$750.00

After purchase of new machine customer will have 3 years of no charge on programming courses.

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine coordinate and programming coordinate systems; Familiarization with Mazatrol functions and program creation; Topics on Turning: Facing, Bar Out, Unknowns Calculating, Tool Data, Drilling, Bar In

Day 2

Topics on Turning (continued): Threading, Tapping, Groove, Bar Out, Copy, Material Shape, Unknowns Calculating (continued), Bar Face, Bar Back, Tool Data (continued), Setup, Priority Function, Virtual Machining

Day 3

MMS; Manual Programming; Parameters and TPC Functions; Factory Tour; Secondary Spindle Programming

Day 4

Topics on Milling: Tool Data, C-Axis Coordinate, Point Machining, Line Machining, Parameters and TPC Functions, Arbitrary Shapes, Manual Programming

Day 5

Topics on Milling (continued): Y-Axis Coordinate, Face Milling, Line Machining, Point Machining, Pocket, Manual Programming, Tornado Milling and Planet Tapping, Arbitrary Shapes

**Course Title:** SmoothX Conversational  
Programming for Variaxis  
(Training is 4 days)

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3  
(*ALL TECHN. CENTERS; go to  
MazakUSA.com to find location near you*)

**Brief Overview:**

The purpose of this class is to provide part programming information using the Mazatrol programming language on Mazak Lathes and Mill Center Lathes.

The class room uses the Smooth Cam.

The class hours for the Turning section for all Lathes and Mill Center Lathes are 8:30AM - 4:30PM daily (3 days) ending at approximately 3:00PM the 4<sup>th</sup> day.

**Requirements:**

Machining and tooling experience on lathes and/or machining centers.

**Category:**

Machining

**Tuition:** \$750.00

After purchase of new machine customer will have 3 years of no charge on programming courses.

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine and programming coordinate systems, Program File Screen, Common Unit, WPC, Face Milling, Tool File, Basic Shapes, Shape and Tool Path Graphics

Day 2

Topics: Edit Features, Same Tool, Multi-Mode, Line Machining, Tool Data and Tool File, WPC, Virtual Machining, Machine Simulation, Arbitrary Shapes

Day 3

Units Explained: end, M Code, Subprogram, Pallet Change, Index, Step, Pocket Mountain and Pocket Valley; Process Control and Program Layout screens; Unknowns Calculating; Shape Rotate and Shape Shift

Day 4

MMS; Tornado Milling; Planet Tapping; Parameters, TPC, VFC and TPS Explained; Factory Tour

**Course Title:** SmoothAi Conversational  
Programming for Variaxis  
(Training is 4 days)

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3  
(*ALL TECHN. CENTERS; go to  
MazakUSA.com to find location near you*)

**Brief Overview:**

The purpose of this class is to provide part programming information using the Mazatrol programming language on Mazak Lathes and Mill Center Lathes.

The classroom uses the Smooth Cam.

The class hours for the Turning section for all Lathes and Mill Center Lathes are 8:30AM - 4:30PM daily (3 days) ending at approximately 3:00PM the 4<sup>th</sup> day.

**Requirements:**

Machining and tooling experience on lathes and/or machining centers.

**Category:**

Machining

**Tuition:** \$750.00

After purchase of new machine customer will have 3 years of no charge on programming courses.

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine and programming coordinate systems, Program File Screen, Common Unit, WPC, Face Milling, Tool File, Basic Shapes, Shape and Tool Path Graphics

Day 2

Topics: Edit Features, Same Tool, Multi-Mode, Line Machining, Tool Data and Tool File, WPC, Virtual Machining, Machine Simulation, Arbitrary Shapes

Day 3

Units Explained: end, M Code, Subprogram, Pallet Change, Index, Step, Pocket Mountain and Pocket Valley; Process Control and Program Layout screens; Unknowns Calculating; Shape Rotate and Shape Shift

Day 4

MMS; Tornado Milling; Planet Tapping; Parameters, TPC, VFC and TPS Explained; Factory Tour

**Course Title:** Smooth Technologies: 3D Assist  
(Training is 2 days)

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3

**Brief Overview:**

The purpose of this class is to provide part programming instruction using the 3D Assist Function, to Mazatrol users who are already knowledgeable in the use of the Smooth Mazatrol Programming. This class will explore the functions of 3D Assist as it pertains to Integrex machines, as well as an explanation of the controls and solid model requirements.

**Requirements:**

Programming experience on the Smooth controls for Integrex.

**Category:**

Machining

**Tuition:** \$750.00

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

N/A



**Course Title:** Smooth Technologies: 3D Assist & Tool Data Conversation for Machining Centers  
(Training is 2 days)

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3

**Brief Overview:**

The purpose of this class is to provide part programming instruction using the 3D Assist Function, to Mazatrol users who are already knowledgeable in the use of the Smooth Mazatrol Programming. This class will explore the functions of 3D Assist as it pertains to Machining, as well as an explanation of the controls and solid model requirements. In addition, we will explain the use of the Tool Data Converter option that can be added to any Smooth control.

**Requirements:**

Programming experience on the Smooth controls for Machining Centers

**Category:**

Machining

**Tuition:** \$750.00

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

N/A

**Course Title:** VC Smart Conversational  
Programming for Machining Centers  
(Training is 4 days)

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3  
(*ALL TECHN. CENTERS; go to  
MazakUSA.com to find location near you*)

**Brief Overview:**

The purpose of this class is to provide part programming information using the Mazatrol programming language on Mazak Machining Centers.

The class room uses the Matrix Cam.

The class hours are 8:30AM - 4:30PM daily (3days) ending at approximately 3:00PM the 4<sup>th</sup> day.

**Requirements:**

Machining and tooling experience on machining centers.

**Category:**

Machining

**Tuition:** \$750.00

After purchase of new machine customer will have 3 years of no charge on programming courses.

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine coordinate and programming coordinate systems; Familiarization with Mazatrol functions and program creation; Face Milling; Point Machining

Day 2

Program Edit Features; Priority Function for the Same Tool; Multi Mode Programming Function; Topics on Machining: Line Machining, Tool Data, WPC, Pocket, Slot

Day 3

Topics on Machining (continued): M Codes, Sub programs, Pallet Change, Index, Pocket Mountain, Pocket Valley, Unknowns Calculating, Shape Rotate and Shape Shift

Day 4

MMS; Tornado Milling and Planet Tapping; Parameters and TPC Functions; Factory Tour

**Course Title:** Hands On Training (HOT) for  
Integrex-e 410 – e 800 MK II (Matrix)  
(Training is 5 days)

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3

### Brief Overview:

The purpose of this course is to prepare experienced machinists for machine setup and operation. Class size is limited to 6 attendees so that each person is assured maximum time on the machine.

The class duration is typically 5 days (8:30-5:00).

### Requirements:

CNC Milling AND Turning skills (preferred); Ability to read programs (for restarts and setting offsets); Familiarity with coordinate systems; Knowledge of rotating & stationary tools; Experience with machine tools having 3 or more axes; Basic machinist skills (e.g.: boring chuck jaws); Basic Mazatrol CNC operation experience

### Category:

Integrex- e Series

**Tuition:** No Charge

### Note:

Lunch will be provided.

### Abbreviated Syllabus:

#### Day 1

Introduction and class overview; Machine component layout & coordinate systems; How the Auto Set function works; Install, qualify & describe tools / load tool data; Show the Auto Set function; Teach tools

#### Day 2

Review; Establish work offsets; Setup the 1st spindle operation; Data Input/Output; Machine a part using the 1st spindle (first operation)

#### Day 3

Review; Setup the workpiece transfer to the 2nd spindle; Machine a part using the 2nd spindle (second operation); Establish & modify part size (offsets); Tool changer & ATC recovery

#### Day 4

Review; Tool changer operation & recovery; Student demonstration (setup machine & cut part); Coordinate system relationships; Establish machine barriers; Tool eye / laser calibration & qualification; Setting machine operation parameters; Overload detection (option)

#### Day 5

Review; (Note: These items are generally discussed & applied through the entire class.) Verify machine alignments – pivot distance; e-Tower operation (Integrex e-Series); Answer any remaining questions

**Course Title:** Hands On Training (HOT) for  
Integrex-i 200 - 400 (Matrix)  
(Training is 5 days)

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3

**Brief Overview:**

The purpose of this course is to prepare experienced machinists for machine setup and operation. Class size is limited to 6 attendees so that each person is assured maximum time on the machine.

The class duration is typically 5 days (8:30~5:00).

**Requirements:**

CNC Milling AND Turning skills (preferred); Ability to read programs (for restarts and setting offsets); Familiarity with coordinate systems; Knowledge of rotating & stationary tools; Experience with machine tools having 3 or more axes; Basic machinist skills (e.g.: boring chuck jaws); Basic Mazatrol CNC operation experience

**Category:**

Integrex- i Series

**Tuition:** No Charge

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

**Day 1**

Introduction and class overview; Machine component layout and axis configuration; Machine coordinate layout; Part planning considerations; Basic machine operation Power On/Off; C & B axis operation; Upper & lower turret operation; Secondary spindle

**Day 2**

Installing, describing and qualifying tool information; Tool files; Tool data (ref. EIA/ISO & Mazatrol programming); Tooling setup; Tool data setup; Tool measurement (tool eye) Establish machine coordinate system; Establish work offsets, initial Z offset (Setup page)

**Day 3**

Machine 1st operation procedures; Set lower turret escape position parameters (Select proper TR1/TR2 parameter page); Set parameters; Command display; Tool path check; Single block; Dry run; Rapid reduce; Feed hold; Spindle override; Feed override

**Day 4**

Preparation for automatic operation; Workpiece transfer processes for 2nd spindle operations; Sizing the workpiece (tool eye & wear compensation); Setup the barrier protection (Setup page)

**Day 5**

Simultaneous versus Balanced Machining (upper & lower turrets); Probe calibration & qualification; EIA/ISO and macro programming considerations; Sub program uses Data I/O; Overload detection; Interface automation

**Course Title:** Hands On Training (HOT) for  
Integrex-i Series SmoothX  
(Training is 4 days)

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3

**Brief Overview:**

The purpose of this course is to prepare experienced machinists for machine setup and operation. Class size is limited to 6 attendees so that each person is assured maximum time on the machine.

The class duration is typically 4 days (8:30-4:30).

**Requirements:**

CNC Milling AND Turning skills (preferred); Familiarity with coordinate systems; Knowledge of rotating & stationary tools; Basic machinist skills (e.g.: boring chuck jaws); Basic Mazatrol CNC operation experience

**Category:**

Integrex- i Series

**Tuition:** No Charge

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

**Day 1**

Introduction and class overview; Machine component layout and axis configuration; Machine coordinate layout; Basic machine operation; Power On/Off; C & B axis operation; Turret operation; Work handling station operation; Overview of Control

**Day 2**

Installing, describing and qualifying tool information; Tool files; Tool data; Tooling setup; Tool data setup; Tool measurement (tool eye); Establish machine coordinate system; Establish work offsets, initial Z offset (Setup page)

**Day 3**

Machine 1st operation procedures; Set work handling station; 2 – Jaw chuck setup; Making jaws; Tailstock operation; Command display; Tool path check; Single block Dry run; Rapid reduce; Feed hold; Spindle override; Feed override; Operate machine to complete part

**Day 4**

Preparation for automatic operation; Workpiece transfer processes for the work handling station; Probe calibration & qualification; Data I/O; Overload detection

**Course Title:** Hands On Training (HOT) for  
Smooth G Machining Center  
(Training is 4 days)

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3

**Brief Overview:**

This class assumes the student is new to the machining environment. The class therefore starts with the appropriate entry level information such as basic metrology, coordinate/axis systems, machine movement, stock securing/hold down methods, appropriate tool use/selection, and progresses through basic Machining Center program set up, proving, and running.

The class duration is typically 4 days (8:30-4:30).

**Requirements:**

Basic mechanical aptitude is beneficial. Some degree of patience and a honest desire to learn.

**Category:**

Machining

**Tuition:** No Charge

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Introduction and class overview; Machine component layout and axis configuration; Machine coordinate layout; Basic machine operation; Overview of Control; Basic math review; Basic part measurement (metrology); Overview of metal types/composition.

Day 2

Installing, describing and qualifying tool information; Tool files; Tool data; Tooling setup; Tool data setup; Tool measurement (tool eye); Establish machine coordinate system; Establish work offsets, initial Z offset (Setup page)

Day 3

Machine 1st operation procedures; Command display; Tool path check; Single block Dry run; Rapid reduce; Feed hold; Spindle override; Feed override; Operate machine to complete part

Day 4

Slightly more advanced settings such as Tool Path Storage and Velocity Feed Control. Students will repeat exercises and run multiples of same part to reinforce learning through repetition.

**Course Title: Advanced Electrical/Software  
PLC Troubleshooting with 640  
(Training is 4 days)**

**Location: National Training Center,  
Florence, KY – East Building Lobby 3**

**Brief Overview:**

This class is designed to familiarize the student with the functions of the CNC Control, the PLC Ladder, and the Servo Systems on the machine. Students will learn how to display needed screens for maintenance, use control diagnostics for troubleshooting, use the Ladder to trace and troubleshoot alarms, diagnose servo and spindle problems, and backup and restore vital data.

The class hours are 8:30AM - 4:30PM daily (3days) with the 4<sup>th</sup> day ending approximately at noon.

**Requirements:**

Students must have basic knowledge of troubleshooting electrical circuits. Students need to attend a Mechanical/Electrical Maintenance Class before attending this class.

**Category:**

640 Controls

**Tuition:** \$750

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Control Overview and Orientation

Day 2

Programmable Logic Controller Overview

Day 3

Servo Systems and Spindle Controller

Day 4

Numerical Control

Course is also offered as an  
Online Course.

**Course Title:** Advanced CNC Control  
Maintenance and PLC Troubleshooting  
for Matrix  
(Training is 4 days)

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3

**Brief Overview:**

This class is designed to familiarize the student with the functions of the CNC Control, the PLC Ladder, and the Servo Systems on the machine. Students will learn how to display needed screens for maintenance, use control diagnostics for troubleshooting, use the Ladder to trace and troubleshoot alarms, diagnose servo and spindle problems, and backup and restore vital data.

The class hours are 8:30AM - 4:30PM daily (3days) with the 4<sup>th</sup> day ending approximately at noon.

**Requirements:**

Students must have basic knowledge of troubleshooting electrical circuits. Students need to attend a Mechanical/Electrical Maintenance Class before attending this class.

**Category:**

Matrix Controls

**Tuition:** \$750

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Control Overview and Orientation

Day 2

Programmable Logic Controller Overview

Day 3

Servo Systems and Spindle Controller

Day 4

Numerical Control

Course is also offered as an  
Online Course.



**Course Title:** Advanced CNC and PLC  
Maintenance for Smooth X/G  
(Training is 3 days)

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3

**Brief Overview:**

This class is designed to familiarize the student with the functions of the CNC Control, the PLC Ladder, and the Servo

Systems on the machine. Students will learn how to display needed screens for maintenance, use control diagnostics for troubleshooting, use the Ladder to trace and troubleshoot alarms, diagnose servo and spindle problems, and backup and restore vital data.

The class hours are 8:30AM - 4:30PM  
Daily. (3 days)

**Requirements:**

Students must have basic knowledge of troubleshooting electrical circuits. Students need to attend a Mechanical/Electrical Maintenance Class before attending this class.

**Category:**

Smooth X/G Controls

**Tuition:** \$750

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Control Overview and Orientation

Day 2

Servo Systems, Spindle Controller and Electrical Diagrams

Day 3

PLC Troubleshooting, Factory Tour

Course is also offered as an  
Online Course.

**Course Title:** Advanced CNC and PLC  
Maintenance for Smooth Ez  
(Training is 3 days)

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3

**Brief Overview:**

This class is designed to familiarize the student with the functions of the CNC Control, the PLC Ladder, and the Servo

Systems on the machine. Students will learn how to display needed screens for maintenance, use control diagnostics for troubleshooting, use the Ladder to trace and troubleshoot alarms, diagnose servo and spindle problems, and backup and restore vital data.

The class hours are 8:30AM - 4:30PM Daily. (3 days)

**Requirements:**

Students must have basic knowledge of troubleshooting electrical circuits. Students need to attend a Mechanical/Electrical Maintenance Class before attending this class.

**Category:**

Smooth Ez Controls

**Tuition:** \$750

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Control Overview and Orientation

Day 2

Servo Systems, Spindle Controller and Electrical Diagrams

Day 3

PLC Troubleshooting, Factory Tour

Course is also offered as an  
Online Course.

**Course Title:** Advanced CNC and PLC  
Maintenance for Smooth Ai  
(Training is 3 days)

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3

**Brief Overview:**

This class is designed to familiarize the student with the functions of the CNC Control, the PLC Ladder, and the Servo

Systems on the machine. Students will learn how to display needed screens for maintenance, use control diagnostics for troubleshooting, use the Ladder to trace and troubleshoot alarms, diagnose servo and spindle problems, and backup and restore vital data.

The class hours are 8:30AM - 4:30PM  
Daily. (3 days)

**Requirements:**

Students must have basic knowledge of troubleshooting electrical circuits. Students need to attend a Mechanical/Electrical Maintenance Class before attending this class.

**Category:**

Smooth Ai Controls

**Tuition:** \$750

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Control Overview and Orientation

Day 2

Servo Systems, Spindle Controller and Electrical Diagrams

Day 3

PLC Troubleshooting, Factory Tour

Course is also offered as an  
Online Course.

**Course Title:** Horizontal and Vertical Machining  
Center Maintenance w/Matrix  
(Training is 4 days)

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3

**Brief Overview:**

Students get an overview of the control hardware and software, troubleshooting and diagnostic functions, electrical circuits, PLC troubleshooting, mechanical functions, and mechanical alignment procedures.

The class hours are 8:30AM - 4:30PM daily (3days) with the 4<sup>th</sup> day ending approximately at noon.

**Requirements:**

Students should possess knowledge of the basic functions of the Windows Operating System.

**Category:**

Machining

**Tuition:** \$750

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine Overview, Control Functions, Control Hardware, Data Save and Restore

Day 2

Electrical Schematics, Control Diagnostics, Remote I/O, MRJ2 Troubleshooting, PLC Troubleshooting

Day 3

Axis Construction, ATC, Headstock, Lubrication

Day 4

Machine Alignments, Factory Tour

Course is also offered as an  
Online Course.

**Course Title:** Horizontal and Vertical Machining  
Center Maintenance w/Smooth G  
(Training is 4 days)

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3

**Brief Overview:**

Students get an overview of the control hardware and software, troubleshooting and diagnostic functions, electrical circuits, PLC troubleshooting, mechanical functions, and mechanical alignment procedures.

The class hours are 8:30AM - 4:30PM daily (3days) with the 4<sup>th</sup> day ending approximately at noon.

**Requirements:**

Students should possess knowledge of the basic functions of the Windows Operating System.

**Category:**

Machining

**Tuition:** \$750

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Control Functions, Control Hardware, Servo System, PLC Auxiliary Servo, Data Save and Restore

Day 2

Electrical Schematics, Mechanical Drawings, PLC Troubleshooting, Machine Overview

Day 3

Axis Construction, ATC, Headstock, Lubrication, Machine Alignments

Day 4

Machine Alignments, Factory Tour

Course is also offered as an  
Online Course.

**Brief Overview:**

Students will receive an overview of the control hardware and software, troubleshooting and diagnostic functions, electrical circuits, PLC troubleshooting, mechanical functions, and mechanical alignment procedures.

The class hours are 8:30AM - 4:30PM daily (3days) with the 4<sup>th</sup> day ending approximately at noon.

**Requirements:**

Students should possess knowledge of the basic functions of the Windows Operating System.

**Category:**

Multitasking

**Tuition:** \$750

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine Overview, Control Functions, Control Hardware, Data Save and Restore

Day 2

Electrical Schematics, Diagnostic Features, MRJ2 Drives, PLC Alarms

Day 3

Machine Alignments, Bearing Replacement, ATC

Day 4

B-Axis Replacement, Preventative Maintenance, Factory Tour

**Brief Overview:**

Students will receive an overview of the control hardware and software, troubleshooting and diagnostic functions, electrical circuits, PLC troubleshooting, mechanical functions, and mechanical alignment procedures.

The class hours are 8:30AM - 4:30PM daily (3days) with the 4<sup>th</sup> day ending approximately at noon.

**Requirements:**

Students should possess knowledge of the basic functions of the Windows Operating System.

**Category:**

Multitasking

**Tuition:** \$750

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine Overview, Control Functions, Control Hardware, Data Save and Restore

Day 2

Electrical Schematics, Diagnostic Features, MRJ2 Drives, PLC Alarms

Day 3

Machine Alignments, Bearing Replacement, ATC

Day 4

B-Axis Replacement, Preventative Maintenance, Factory Tour

**Course Title: Integrex e Horizontal Series  
Mechanical & Electrical Maintenance  
with Matrix  
(Training is 4 days)**

**Location: National Training Center,  
Florence, KY – East Building Lobby 3**

**Brief Overview:**

Students will receive an overview of the control hardware and software, troubleshooting and diagnostic functions, electrical circuits, PLC troubleshooting, mechanical functions, and mechanical alignment procedures.

The class hours are 8:30AM - 4:30PM daily (3days) with the 4<sup>th</sup> day ending approximately at noon.

**Requirements:**

Students should possess knowledge of the basic functions of the Windows Operating System.

**Category:**

Integrex-e

**Tuition:** \$750

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine Overview, Control Functions, Control Hardware, Data Save and Restore

Day 2

Electrical Schematics, Diagnostic Features, MRJ2 Drives, PLC Alarms

Day 3

Machine Alignments, Bearing Replacement, ATC

Day 4

B-Axis Replacement, Preventative Maintenance, Factory Tour



**Course Title: Integrex e Vertical Series  
Mechanical & Electrical Maintenance with  
640 M Pro  
(Training is 4 days)**

**Location: National Training Center,  
Florence, KY – East Building Lobby 3**

**Brief Overview:**

This class is designed to provide both new and current users of Mazak Machining Centers with a working knowledge of the many assemblies of the machine. By providing an in depth knowledge, it will allow students to diagnose, troubleshoot, and repair in a more efficient manner.

The class hours are 8:30AM - 4:30PM daily (3days) with the 4<sup>th</sup> day ending approximately at noon.

**Requirements:**

Students should possess knowledge of the basic functions of the Windows Operating System.

**Category:**

Integrex-e

**Tuition:** \$750

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine Overview, Mechanical Parts, Electrical Schematics, Data Save and Restore

Day 2

Machine Diagnostics, MDS and MRJ2 Troubleshooting

Day 3

Axis Construction and Alignment, ATC, Pallet Changer

Day 4

Spindle Construction and Alignment, Preventative Maintenance, Factory Tour

**Course Title: Integrex e Vertical Series  
Mechanical & Electrical Maintenance  
with Matrix  
(Training is 4 days)**

**Location: National Training Center,  
Florence, KY – East Building Lobby 3**

**Brief Overview:**

This class is designed to provide both new and current users of Mazak Machining Centers with a working knowledge of the many assemblies of the machine. By providing an in depth knowledge, it will allow students to diagnose, trouble shoot, and repair in a more efficient manner.

The class hours are 8:30AM - 4:30PM daily (3days) with the 4<sup>th</sup> day ending approximately at noon.

**Requirements:**

Students should possess knowledge of the basic functions of the Windows Operating System.

**Category:**

Integrex-e

**Tuition:** \$750

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine Overview, Mechanical Parts, Electrical Schematics, Data Save and Restore

Day 2

Machine Diagnostics, MDS and MRJ2 Troubleshooting

Day 3

Axis Construction and Alignment, ATC, Pallet Changer

Day 4

Spindle Construction and Alignment, Preventative Maintenance, Factory Tour

**Course Title: Integrex e Vertical Series  
Mechanical & Electrical Maintenance  
with SmoothX  
(Training is 4 days)**

**Location: National Training Center,  
Florence, KY – East Building Lobby 3**

**Brief Overview:**

This class is designed to provide both new and current users of Mazak Machining Centers with a working knowledge of the many assemblies of the machine. By providing an in-depth knowledge, it will allow students to diagnose, trouble shoot, and repair in a more efficient manner.

The class hours are 8:30AM - 4:30PM daily (3days) with the 4<sup>th</sup> day ending approximately at noon.

**Requirements:**

Students should possess knowledge of the basic functions of the Windows Operating System.

**Category:**

Integrex-e

**Tuition:** \$750

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine Overview, Mechanical Parts, Electrical Schematics, Data Save and Restore

Day 2

Machine Diagnostics, MDS and Auxiliary Troubleshooting

Day 3

Axis Construction and Alignment, ATC, Pallet Changer

Day 4

Spindle Construction and Alignment, Preventative Maintenance, Factory Tour

**Course Title:** Integrex e-800 Mechanical & Electrical Maintenance with 640M Pro  
(Training is 4 days)

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3

**Brief Overview:**

This class is designed to provide both new and current users of Mazak Machining Centers with a working knowledge of the many assemblies of the machine. By providing an in depth knowledge, it will allow students to diagnose, trouble shoot, and repair in a more efficient manner.

The class hours are 8:30AM - 4:30PM daily (3days) with the 4<sup>th</sup> day ending approximately at noon.

**Requirements:**

Students should possess knowledge of the basic functions of the Windows Operating System.

**Category:**

Integrex-e

**Tuition:** \$750

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine Overview, Mechanical Parts, Electrical Schematics, Data Save and Restore

Day 2

Machine Diagnostics, MDS and MRJ2 Troubleshooting

Day 3

Axis Construction and Alignment, ATC, Pallet Changer

Day 4

Spindle Construction and Alignment, Preventative Maintenance, Factory Tour

**Course Title:** Integrex e-800 Mechanical & Electrical Maintenance with Matrix  
(Training is 4 days)

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3

**Brief Overview:**

This class is designed to provide both new and current users of Mazak Machining Centers with a working knowledge of the many assemblies of the machine. By providing an in depth knowledge, it will allow students to diagnose, trouble shoot, and repair in a more efficient manner.

The class hours are 8:30AM - 4:30PM daily (3days) with the 4<sup>th</sup> day ending approximately at noon.

**Requirements:**

Students should possess knowledge of the basic functions of the Windows Operating System.

**Category:**

Integrex-e

**Tuition:** \$750

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine Overview, Mechanical Parts, Electrical Schematics, Data Save and Restore

Day 2

Machine Diagnostics, MDS and MRJ2 Troubleshooting

Day 3

Axis Construction and Alignment, ATC, Pallet Changer

Day 4

Spindle Construction and Alignment, Preventative Maintenance, Factory Tour

**Course Title:** Integrex e-1250 Mechanical & Electrical Maintenance with Smooth  
(Training is 4 days)

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3

**Brief Overview:**

This class is designed to provide both new and current users of Mazak Machining Centers with a working knowledge of the many assemblies of the machine. By providing an in-depth knowledge, it will allow students to diagnose, trouble shoot, and repair in a more efficient manner.

The class hours are 8:30AM - 4:30PM daily (3days) with the 4<sup>th</sup> day ending approximately at noon.

**Requirements:**

Students should possess knowledge of the basic functions of the Windows Operating System.

**Category:**

Integrex-e

**Tuition:** \$750

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine Overview, Mechanical Parts, Electrical Schematics, Data Save and Restore

Day 2

Machine Diagnostics, MDS and PLC Troubleshooting

Day 3

Axis Construction and Alignment, ATC, Pallet Changer

Day 4

Spindle Construction and Alignment, Preventative Maintenance, Factory Tour

**Course Title:** Integrex e-1600 Mechanical & Electrical Maintenance with Smooth  
(Training is 4 days)

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3

**Brief Overview:**

This class is designed to provide both new and current users of Mazak Machining Centers with a working knowledge of the many assemblies of the machine. By providing an in-depth knowledge, it will allow students to diagnose, trouble shoot, and repair in a more efficient manner.

The class hours are 8:30AM - 4:30PM daily (3days) with the 4<sup>th</sup> day ending approximately at noon.

**Requirements:**

Students should possess knowledge of the basic functions of the Windows Operating System.

**Category:**

Integrex-e

**Tuition:** \$750

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine Overview, Mechanical Parts, Electrical Schematics, Data Save and Restore

Day 2

Machine Diagnostics, MDS and PLC Troubleshooting

Day 3

Axis Construction and Alignment, ATC, Pallet Changer

Day 4

Spindle Construction and Alignment, Preventative Maintenance, Factory Tour

**Course Title:** Integrex i 100 - 400 Mechanical  
& Electrical Maintenance with SmoothX  
(Training is 4 days)

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3

**Brief Overview:**

This class is designed to provide both new and current users of Mazak Machining Centers with a working knowledge of the many assemblies of the machine. By providing an in-depth knowledge, it will allow students to diagnose, trouble shoot, and repair in a more efficient manner.

The class hours are 8:30AM - 4:30PM daily (3days) with the 4<sup>th</sup> day ending approximately at noon.

**Requirements:**

Students should possess knowledge of the basic functions of the Windows Operating System.

**Category:**

Integrex-i

**Tuition:** \$750

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine Overview, Mechanical Parts, Electrical Schematics, Data Save and Restore

Day 2

Machine Diagnostics, MDS and PLC Troubleshooting

Day 3

Axis Construction and Alignment, ATC, Pallet Changer

Day 4

Spindle Construction and Alignment, Preventative Maintenance, Factory Tour

Course is also offered as an  
Online Course.



**Course Title:** Integrex i-H Maintenance with SmoothAi (i250H, i350H, 1450H)  
(Training is 4 days)

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3

**Brief Overview:**

This class is designed to provide both new and current users of Mazak Machining Centers with a working knowledge of the many assemblies of the machine. By providing an in-depth knowledge, it will allow students to diagnose, trouble shoot, and repair in a more efficient manner.

The class hours are 8:30AM - 4:30PM daily (3days) with the 4<sup>th</sup> day ending approximately at noon.

**Requirements:**

Students should possess knowledge of the basic functions of the Windows Operating System.

**Category:**

Integrex-i

**Tuition:** \$750

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine Overview, Mechanical Parts, Electrical Schematics, Data Save and Restore

Day 2

Machine Diagnostics, MDS and PLC Troubleshooting

Day 3

Axis Construction and Alignment, ATC, Pallet Changer

Day 4

Spindle Construction and Alignment, Preventative Maintenance, Factory Tour

**Brief Overview:**

This class is designed to provide both new and current users of Mazak Machining Centers with a working knowledge of the many assemblies of the machine. By providing an in depth knowledge, it will allow students to diagnose, trouble shoot, and repair in a more efficient manner.

The class hours are 8:30AM - 4:30PM daily (3days) with the 4<sup>th</sup> day ending approximately at noon.

**Requirements:**

Students should possess knowledge of the basic functions of the Windows Operating System.

**Category:**

Integrex-i

**Tuition:** \$750

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine Overview, Mechanical Parts, Electrical Schematics, Data Save and Restore

Day 2

Machine Diagnostics, MDS and MRJ2 Troubleshooting

Day 3

Axis Construction and Alignment, ATC, Pallet Changer

Day 4

Spindle Construction and Alignment, Preventative Maintenance, Factory Tour

**Course Title:** Integrex i 200 – i 400  
**Mechanical & Electrical Maintenance with  
Matrix II**  
**(Training is 4 days)**

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3

**Brief Overview:**

This class is designed to provide both new and current users of Mazak Machining Centers with a working knowledge of the many assemblies of the machine. By providing an in depth knowledge, it will allow students to diagnose, trouble shoot, and repair in a more efficient manner.

The class hours are 8:30AM - 4:30PM daily (3days) with the 4<sup>th</sup> day ending approximately at noon.

**Requirements:**

Students should possess knowledge of the basic functions of the Windows Operating System.

**Category:**

Integrex-i

**Tuition:** \$750

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine Overview, Mechanical Parts, Electrical Schematics, Data Save and Restore

Day 2

Machine Diagnostics, MDS and MRJ2 Troubleshooting

Day 3

Axis Construction and Alignment, ATC, Pallet Changer

Day 4

Spindle Construction and Alignment, Preventative Maintenance, Factory Tour

**Brief Overview:**

This class is designed to provide both new and current users of Mazak Machining Centers with a working knowledge of the many assemblies of the machine. By providing an in depth knowledge, it will allow students to diagnose, trouble shoot, and repair in a more efficient manner.

The class hours are 8:30AM - 4:30PM daily (3days) with the 4<sup>th</sup> day ending approximately at noon.

**Requirements:**

Students should possess knowledge of the basic functions of the Windows Operating System.

**Category:**

Integrex-i

**Tuition:** \$750

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine Overview, Mechanical Parts, Electrical Schematics, Data Save and Restore

Day 2

Machine Diagnostics, MDS and MRJ2 Troubleshooting

Day 3

Axis Construction and Alignment, ATC, Pallet Changer

Day 4

Spindle Construction and Alignment, Preventative Maintenance, Factory Tour

**Course Title:** Integrex j 200 – 400 Series  
**Mechanical & Electrical Maintenance**  
**Matrix CNC**  
**(Training is 4 days)**

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3

**Brief Overview:**

This class is designed to provide both new and current users of Mazak Machining Centers with a working knowledge of the many assemblies of the machine. By providing an in depth knowledge, it will allow students to diagnose, trouble shoot, and repair in a more efficient manner.

The class hours are 8:30AM - 4:30PM daily (3days) with the 4<sup>th</sup> day ending approximately at noon.

**Requirements:**

Students should possess knowledge of the basic functions of the Windows Operating System.

**Category:**

Integrex-j

**Tuition:** \$750

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine Overview, Mechanical Parts, Electrical Schematics, Data Save and Restore

Day 2

Machine Diagnostics, MDS and MRJ2 Troubleshooting

Day 3

Axis Construction and Alignment, ATC, Pallet Changer

Day 4

Spindle Construction and Alignment, Preventative Maintenance, Factory Tour

**Brief Overview:**

This class is designed to provide both new and current users of Mazak Machining Centers with a working knowledge of the many assemblies of the machine. By providing an in depth knowledge, it will allow students to diagnose, trouble shoot, and repair in a more efficient manner.

The class hours are 8:30AM - 4:30PM daily (3days) with the 4<sup>th</sup> day ending approximately at noon.

**Requirements:**

Students should possess knowledge of the basic functions of the Windows Operating System.

**Category:**

Machining

**Tuition:** \$750

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine Overview, Control Functions, Control Hardware, Data Save and Restore

Day 2

Electrical Schematics, Control Diagnostics, Remote I/O, MRJ2 Troubleshooting, PLC

Day 3

Axis Construction, ATC, Headstock, Lubrication

Day 4

Machine Alignments, Factory Tour

**Course Title:** Matrix/Matrix 2 Control Maintenance  
(Training is 3 days)

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3

**Brief Overview:**

Students get an overview of the control hardware and software, troubleshooting and diagnostic functions, electrical circuits and PLC troubleshooting.

The class hours are 8:30AM - 4:30PM Daily. (3days)

**Requirements:**

Students should possess knowledge of the basic functions of the Windows Operating System.

**Category:**

Matrix Controls

**Tuition:** \$750

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine Overview, Control Functions, Control Hardware, Data Save and Restore

Day 2

Electrical Schematics, Control Diagnostics, MRJ2 Troubleshooting

Day 3

Remote I/O, PLC Troubleshooting, Factory Tour

**Course Title:** Palletech PMC Mechanical & Electrical Maintenance  
(Training is 2 days)

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3

**Brief Overview:**

This class is designed to provide both new and current users of a Mazak PMC Web Cell with a working knowledge of the Manufacturing cell operation and maintenance for a horizontal machining center.

The class hours are 8:30AM–4:30PM daily.

**Requirements:**

Basic knowledge of CNC operation and basic mechanical and electrical skills

**Category:**

Machining

**Tuition:** \$750.00

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

**Day 1**

Safety; Overview of PMC Web Cell operation; PMC Web screens for operation and maintenance; Starting and stopping system operation; Backing up and restoring system data

**Day 2**

System parameters and alarms; Overview of electrical and parts manuals; Recovery procedure for the cell; Robot alignments and preventive maintenance.



**Brief Overview:**

Students get an overview of the control hardware and software, troubleshooting and diagnostic functions, electrical circuits and PLC troubleshooting.

The class hours are 8:30AM - 4:30PM Daily. (3days)

**Requirements:**

Students should possess knowledge of the basic functions of the Windows Operating System.

**Category:**

Smooth C Controls

**Tuition:** \$750

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine Overview, Control Functions, Control Hardware, Data Save and Restore

Day 2

Electrical Schematics, Control Diagnostics, MRJ2 Troubleshooting

Day 3

Remote I/O, PLC Troubleshooting, Factory Tour

**Brief Overview:**

Students get an overview of the control hardware and software, troubleshooting and diagnostic functions, electrical circuits and PLC troubleshooting.

The class hours are 8:30AM - 4:30PM Daily. (3days)

**Requirements:**

Students should possess knowledge of the basic functions of the Windows Operating System.

**Category:**

Smooth X Controls

**Tuition:** \$750

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Control Overview, Control Functions, Control Hardware, Data Save and Restore

Day 2

Electrical Schematics, Control Diagnostics and MRJ2 Troubleshooting

Day 3

Remote I/O, PLC Troubleshooting, Factory Tour

**Brief Overview:** This class is designed to provide both new and current users of Mazak Machining Centers with a working knowledge of the many assemblies of the machine. By providing an in-depth knowledge, it will allow students to diagnose, troubleshoot, and repair in a more efficient manner. The class hours are 8:30AM - 4:30PM daily (3days) with the 4th day ending approximately at noon.

**Requirements:** Students should possess knowledge of the basic functions of the Windows Operating System.

**Category:** Turning Centers; Quick Turn, Hyperquadrex, Muliplex, Slant Turn, Dual Turn

**Tuition:** \$750

**Note:**  
Lunch will be provided.

**Abbreviated Syllabus:**

Day 1 Machine Overview, Control Functions, Control Hardware, Data Save and Restore

Day 2 Electrical Schematics, Control Diagnostics, Parameters, Remote I/O, and PLC

Day 3 Axis Construction, ATC, Turret, Headstock, Preventative Maintenance and Lubrication

Day 4 Machine Alignments, Factory Tour

**Brief Overview:** This class is designed to provide both new and current users of Mazak Machining Centers with a working knowledge of the many assemblies of the machine. By providing an in-depth knowledge, it will allow students to diagnose, troubleshoot, and repair in a more efficient manner. The class hours are 8:30AM - 4:30PM daily (3days) with the 4th day ending approximately at noon.

**Requirements:** Students should possess knowledge of the basic functions of the Windows Operating System.

**Category:** Turning Centers; Quick Turn, Hyperquadrex, Muliplex, Slant Turn, Dual Turn

**Tuition:** \$750

**Note:**  
Lunch will be provided.

**Abbreviated Syllabus:**

Day 1 Machine Overview, Control Functions, Control Hardware, Data Save and Restore

Day 2 Electrical Schematics, Control Diagnostics, Parameters, Remote I/O, and PLC

Day 3 Axis Construction, ATC, Turret, Headstock, Preventative Maintenance and Lubrication

Day 4 Machine Alignments, Factory Tour

Course is also offered as an  
Online Course.

**Brief Overview:** This class is designed to provide both new and current users of Mazak Machining Centers with a working knowledge of the many assemblies of the machine. By providing an in-depth knowledge, it will allow students to diagnose, troubleshoot, and repair in a more efficient manner. The class hours are 8:30AM - 4:30PM daily (3days) with the 4th day ending approximately at noon.

**Requirements:** Students should possess knowledge of the basic functions of the Windows Operating System.

**Category:** Turning Centers; Quick Turn, Hyperquadrex, Muliplex, Slant Turn, Dual Turn

**Tuition:** \$750

**Note:**  
Lunch will be provided.

**Abbreviated Syllabus:**

Day 1 Machine Overview, Control Functions, Control Hardware, Data Save and Restore

Day 2 Electrical Schematics, Control Diagnostics, Parameters, Remote I/O, and PLC

Day 3 Axis Construction, ATC, Turret, Headstock, Preventative Maintenance and Lubrication

Day 4 Machine Alignments, Factory Tour

**Brief Overview:** This class is designed to provide both new and current users of Mazak Machining Centers with a working knowledge of the many assemblies of the machine. By providing an in-depth knowledge, it will allow students to diagnose, troubleshoot, and repair in a more efficient manner. The class hours are 8:30AM - 4:30PM daily (3days) with the 4th day ending approximately at noon.

**Requirements:** Students should possess knowledge of the basic functions of the Windows Operating System.

**Category:** Turning Centers; Quick Turn, Hyperquadrex, Muliplex, Slant Turn, Dual Turn

**Tuition:** \$750

**Note:**  
Lunch will be provided.

**Abbreviated Syllabus:**

Day 1 Machine Overview, Control Functions, Control Hardware, Data Save and Restore

Day 2 Electrical Schematics, Control Diagnostics, Parameters, Remote I/O, and PLC

Day 3 Axis Construction, ATC, Turret, Headstock, Preventative Maintenance and Lubrication

Day 4 Machine Alignments, Factory Tour

**Course Title:** Variaxis Mechanical & Electrical  
Maintenance with 640M  
(Training is 4 days)

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3

**Brief Overview:**

Students will receive an overview of the control hardware and software, troubleshooting and diagnostic functions, electrical circuits, PLC troubleshooting procedures, mechanical functions, and mechanical alignment procedures.

The class hours are 8:30AM - 4:30PM daily (3days) with the 4<sup>th</sup> day ending approximately at noon.

**Requirements:**

Students should possess knowledge of the basic functions of the Windows Operating System.

**Category:**

Machining

**Tuition:** \$750

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine Alignments, Axis Construction, Spindle Construction

Day 2

Rotary Joint Replacement, Collet Replacement, ATC

Day 3

MRJ2 Troubleshooting, Data Save and Restore Procedures, Electrical Circuits Overview

Day 4

Servo Troubleshooting, PLC Troubleshooting, Factory Tour

**Course Title:** Variaxis 500, 630, & 730  
**Mechanical & Electrical Maintenance with  
Matrix**  
**(Training is 4 days)**

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3

**Brief Overview:**

Students will receive an overview of the control hardware and software, troubleshooting and diagnostic functions, electrical circuits, PLC troubleshooting procedures, mechanical functions, and mechanical alignment procedures.

The class hours are 8:30AM - 4:30PM daily (3days) with the 4<sup>th</sup> day ending approximately at noon.

**Requirements:**

Students should possess knowledge of the basic functions of the Windows Operating System.

**Category:**

Machining

**Tuition:** \$750

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine Alignments, Axis Construction, Spindle Construction

Day 2

Rotary Joint Replacement, Collet Replacement, ATC

Day 3

MRJ2 Troubleshooting, Data Save and Restore Procedures, Electrical Circuits Overview

Day 4

Servo Troubleshooting, PLC Troubleshooting, Factory Tour



**Course Title:** Variaxis i Series  
w/ Matrix II Maintenance  
(Training is 4 days)

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3

**Brief Overview:**

Students will receive an overview of the control hardware and software, troubleshooting and diagnostic functions, electrical circuits, PLC troubleshooting procedures, mechanical functions, and mechanical alignment procedures.

The class hours are 8:30AM - 4:30PM daily (3days) with the 4<sup>th</sup> day ending approximately at noon.

**Requirements:**

Students should possess knowledge of the basic functions of the Windows Operating System.

**Category:**

Machining

**Tuition:** \$750

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine Alignments, Axis Construction, Spindle Construction

Day 2

Rotary Joint Replacement, Collet Replacement, ATC

Day 3

MRJ2 Troubleshooting, Data Save and Restore Procedures, Electrical Circuits Overview

Day 4

Servo Troubleshooting, PLC Troubleshooting, Factory Tour

**Course Title:** Variaxis i Series  
w/ SmoothX Maintenance  
(Training is 4 days)

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3

**Brief Overview:**

Students will receive an overview of the control hardware and software, troubleshooting and diagnostic functions, electrical circuits, PLC troubleshooting procedures, mechanical functions, and mechanical alignment procedures.

The class hours are 8:30AM - 4:30PM daily (3days) with the 4<sup>th</sup> day ending approximately at noon.

**Requirements:**

Students should possess knowledge of the basic functions of the Windows Operating System.

**Category:**

Machining

**Tuition:** \$750

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine Alignments, Axis Construction, Spindle Construction

Day 2

Rotary Joint Replacement, Collet Replacement, ATC

Day 3

MRJ2 Troubleshooting, Data Save and Restore Procedures, Electrical Circuits Overview

Day 4

Servo Troubleshooting, PLC Troubleshooting, Factory Tour

Course is also offered as an  
Online Course.

**Course Title:** Variaxis i Series  
w/ Smooth Ai Maintenance  
(Training is 4 days)

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3

**Brief Overview:**

Students will receive an overview of the control hardware and software, troubleshooting and diagnostic functions, electrical circuits, PLC troubleshooting procedures, mechanical functions, and mechanical alignment procedures.

The class hours are 8:30AM - 4:30PM daily (3days) with the 4<sup>th</sup> day ending approximately at noon.

**Requirements:**

Students should possess knowledge of the basic functions of the Windows Operating System.

**Category:**

Machining

**Tuition:** \$750

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine Alignments, Axis Construction, Spindle Construction

Day 2

Rotary Joint Replacement, Collet Replacement, ATC

Day 3

MRJ2 Troubleshooting, Data Save and Restore Procedures, Electrical Circuits Overview

Day 4

Servo Troubleshooting, PLC Troubleshooting, Factory Tour

Course is also offered as an  
Online Course.

**Course Title:** Versatech V-100N / V-140N  
**Mechanical & Electrical Maintenance**  
**(Training is 4 days)**

**Location:** National Training Center,  
Florence, KY – East Building Lobby 3

**Brief Overview:**

This class is designed to provide both new and current users of Mazak Machining Centers with a working knowledge of the many assemblies of the machine. By providing an in-depth knowledge, it will allow students to diagnose, trouble shoot, and repair in a more efficient manner.

The class hours are 8:30AM - 4:30PM daily (3days) with the 4<sup>th</sup> day ending approximately at noon.

**Requirements:**

Students should possess knowledge of the basic functions of the Windows Operating System.

**Category:**

Machining

**Tuition:** \$750

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine Overview, Control Functions, Control Hardware, Data Save and Restore

Day 2

Electrical Schematics, Control Diagnostics, Remote I/O, MRJ2 Troubleshooting, PLC

Day 3

Axis Construction, ATC, Headstock, Lubrication

Day 4

Machine Alignments, Factory Tour

**Brief Overview:**

Students an overview of the control hardware and software, troubleshooting and diagnostic functions, electrical circuits, PLC troubleshooting, mechanical functions, and mechanical alignment procedures.

The class hours are 8:30AM - 4:30PM daily (3days) with the 4<sup>th</sup> day ending approximately at noon.

**Requirements:**

Students should possess knowledge of the basic functions of the Windows Operating System.

**Category:**

Machining

**Tuition:** \$750

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Machine Overview, Control Functions, Control Hardware, Data Save and Restore

Day 2

Electrical Schematics, Control Diagnostics, Remote I/O, MRJ2 Troubleshooting, PLC

Day 3

Axis Construction, ATC, Headstock, Lubrication

Day 4

Machine Alignments, Factory Tour

**Brief Overview:**

Students get an overview of the control hardware and software, troubleshooting and diagnostic functions, electrical circuits, PLC troubleshooting, mechanical functions, and mechanical alignment procedures.

The class hours are 8:30AM - 4:30PM daily (3days) with the 4<sup>th</sup> day ending approximately at noon.

**Requirements:**

Students should possess knowledge of the basic functions of the Windows Operating System.

**Category:**

Machining

**Tuition:** \$750

**Note:**

Lunch will be provided.

**Abbreviated Syllabus:**

Day 1

Control Functions, Control Hardware, Servo System, PLC Auxiliary Servo, Data Save and Restore

Day 2

Electrical Schematics, Mechanical Drawings, PLC Troubleshooting, Machine Overview

Day 3

Axis Construction, ATC, Headstock, Lubrication, Machine Alignments

Day 4

Machine Alignments, Factory Tour

# **Technology Centers**

Below is a list of Mazak Technology Centers in the USA. For additional information please go to <https://support.mazakcorp.com/Anonymous/Locations.aspx>



## **MAZAK CORPORATION**

National Technology Center, Multi-Tasking & Manufacturing Excellence

8025 Production Drive, Florence KY 41042

Telephone: + (1) 859-342-1700

Fax: + (1) 859-342-1865

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## **MAZAK NORTHEAST TECHNOLOGY CENTER**

Northeast Technology Center (Medical Focus)

700 Old County Circle, Windsor Locks CT 06096

Telephone: + (1) 860-292-4400

Fax: + (1) 860-654-0752

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## **MAZAK SOUTHEAST TECHNOLOGY CENTER**

Southeast Technology Center

1075 Northbrook Parkway, Suwanee GA 30024-2931

Telephone: + (1) 678-985-4800

Fax: + (1) 678-985-4801

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## **MAZAK MID-WEST TECHNOLOGY CENTER**

Mid-West Technology Center

300 East Commerce Drive, Schaumburg IL 60173

Telephone: + (1) 847-885-8311

Fax: + (1) 847-885-9565



## **MAZAK SOUTHWEST TECHNOLOGY CENTER**

Southwest Technology Center (Energy Focus)

10950 Greenbend Blvd., Houston TX 77067

Telephone: + (1) 281-931-7770

Fax: + (1) 281-931-6191

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## **MAZAK WEST TECHNOLOGY CENTER**

West Technology Center (Aerospace Focus)

1333 West 190<sup>th</sup> Street, Gardena CA 90248

Telephone: + (1) 310-327-7172

Fax: + (1) 310-538-4087

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## **MAZAK OPTONICS CORPORATION**

Chicago Optonics Technology Center

2725 Galvin Court, Elgin IL 60124

Telephone: + (1) 847-252-4750

Fax: + (1) 847-252-4599

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## **MAZAK CANADA TECHNOLOGY CENTRE**

Canada Technology Center

50 Commerce Ct., Cambridge, Ontario, Canada N3C 4P7

Telephone: + (1) 519-658-2021

Fax: + (1) 519-658-2023

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## **MAZAK MEXICO, S.A. DE C.V.**

Mexico Technology Center

AV. Spectrum No. 100 Parque Industrial Finsa Monterrey, Apodaca,  
N.L. Mexico

Telephone: + (52) 81-8221-0910/0914

Fax: + (52) 81-8221-0919



# **Instructors BIO**

## **National Training Instructors**

### **BILL BAKER:**

Attended evening classes at both U.C. (Accounting) and Cincinnati State (Manufacturing Eng.) while working days as a CNC Programmer at Aerobrazo Corp. Worked as the Production Manager at Jarman Products. Started my career at Cincinnati Milacron and attended the apprentice program. Have used many Cad-Cams including MasterCam, Pro/E, Unigraphics and SurfCam. Prior to his current position, Bill worked as a programmer Production and in Applications. When not working, he loves to play golf.

### **ROY GENTRY:**

Prior to joining Mazak, Roy earned a BS in Industrial and Engineering Technology and an MS in Industrial Technology from Morehead State University. Roy began his career at Mazak as a field service engineer and large machine installer and has performed countless installations of large INTEGREX e-Series machines. Roy joined the training department in 2007, and currently teaches a wide range of maintenance courses. In his free time, Roy officiates a variety of high school and college sports including baseball and basketball and is licensed by the Kentucky High School Athletic Association, the Amateur Baseball Umpire Association, the Collegiate Baseball Umpire Alliance and the Southeast Independent Umpire Association. Roy also officiates in several NCAA conferences.

### **STEPHEN GRONECK:**

Steve came to Mazak in 2015 after 40 years as a machinist. He has worked in such fields as aerospace, where he has created programs and processes for GE, Allison, Rolls Royce, and NASA, and in the weapons field. Creating Programs and supervising the daily operation of Mazak horizontal machines that created upper and lower receivers for AR rifles. He attended CTC for Blue Print drawing. As well as numerous training classes for a variety of controls and programming software. Steve has been using Mazatrol for the past 15 years. Before that he was proficient with EIA. Music and traveling with his wife are his favorite pass times now. As well as following college sports.

### **RON KELLEY:**

Ron began his machine tool career in 1980 as an Electronic Maintenance Technician. Over the years he's also held positions as a Service Engineer, Service Manager, Technical Service Coordinator, Operations Coordinator and IT Manager. Ron enjoys continuous learning and building on his knowledge to teach the next generation of maintenance and service personnel. He has a passion for technology and enjoys trips with his wife to Disney World, talking on his ham radio and being a member of the Racing Commission at the All-American Soap Box Derby in Akron, Ohio.

## CHRISTIAN MABRY:

Christian began working for Mazak in 2018. Prior to joining Mazak, he worked as a machinist for ten years. While in the field, he fabricated products for the construction, defense, medical, automotive, and aviation industries. His machining experience included the setup, programming, and operation of Mazak machines. In addition to his career in manufacturing, he taught in the Computerized Manufacturing and Machining department at Gateway Community and Technical College. He has also earned a Bachelor of Science in Management from Northern Kentucky University and an Associate of Applied Science in Machine Tool Technology from Gateway Community and Technical College. In his free time, he enjoys sports and outdoor activities.

## PATRICK REYNOLDS

Hello, I recently had the opportunity to join Mazak's Training Team at the National Technology Center as a programming instructor. Prior to coming to Mazak, I taught Machining and other Applied Engineering courses at a technical college in Georgetown, KY. My machining background consist of working in job shops specializing in high performance motorsports applications. Over the years, I have earned several Associate Degrees, as well as a Bachelor of Science in Applied Engineering Management from Eastern Kentucky University. I also have an extensive clinical/educational background in human anatomy/physiology and emergency medicine and was an instructor in these disciplines in a previous career. I am committed to lifelong education and am an avid reader. I am also passionate about several forms of motorsports, aviation, and most anything transportation related.

## ROB WRIGHT:

After college, Rob worked for Cincinnati Milacron in their Electronics Division but had a desire to get into Field Service side of machine tools. Because of this desire he transferred to the machining plant of Milacron's Plastics Division in the maintenance department. Rob worked in the maintenance department for 5 years before leaving Milacron and starting a mortgage brokerage company while receiving his, Health & Life Insurance license, Securities Series 6 and 7 license and Mortgage Brokerage license. After selling the Mortgage Brokerage business Rob came to work at Mazak in 1996 as a Field Service Engineer. After 22 years of Field Service, where he worked on all aspects of machine tool repair, programming, PLC and systems, Rob transferred into Mazak's Training Department where he has excelled as an instructor.

# **Accommodations**

**Mazak Customer:** When making reservations be sure to inform hotel you are attending a Mazak Training Class at the Florence, Ky., Mazak Training Center to receive the preferred rates.

**Note:** Mazak is NOT responsible for any hotel charges. Rates are subject to change without notice.

Comfort Suites Florence  
5805 Merchants Street  
Florence, KY 41042  
859-488-1708  
**www.choicehotels.com**

- \$110
  - Transportation To/From International Airport
  - Free WiFi
  - Fitness Center
  - Continental Breakfast
  - 4.6 miles from Mazak & 5.1 from airport
- 

Courtyard Marriott  
46 Cavalier Blvd.  
Florence, KY 41042  
859-371-6464  
**www.Marriott.com/cvgfl**

- \$109
  - Transportation To/From International Airport
  - Transportation To/From Mazak
  - Indoor Pool, Whirlpool & Exercise Room
  - Free wireless high speed
  - 3.3 miles from Mazak & 4.5 from airport
- 

Hampton Inn  
7393 Turfway Rd.  
Florence, KY 41042  
859-283-1600  
**www.hamptoninn.com**

- \$112
  - Transportation To/From International Airport
  - Pool & restaurants in walking distance
  - Free wireless high speed
  - Continental Breakfast
  - 3.92 miles from Mazak & 5.44 from airport
- 

Hilton-Greater Cincinnati (Full Service)  
7373 Turfway Rd  
Florence, KY 41042  
859-371-4400  
**www.hiltoncincinnatiairport.com**

- \$119
  - Transportation To/From International Airport
  - Restaurant and Cocktail Lounge on site
  - Free Internet
  - 3.91 miles from Mazak & 5.44 from airport
- 

Holiday Inn (Full Service)  
1717 Airport Exchange Blvd.  
Erlanger, KY 41018  
859-746-5608  
800-HOLIDAY  
**www.holiday-inn.com**

- \$115
- Transportation To/From International Airport
- Restaurant and Cocktail Lounge on site
- Internet Data Port
- 8.1 miles from Mazak & 3.47 from airport

Holiday Inn  
7905 Freedom Way  
Florence, KY 41042  
859-980-1700  
**www.holidayinn.com**

- \$110 King / \$120 Double
  - On site restaurant
  - Indoor Pool, Fitness center
  - Guest laundry facilities
  - Free high speed wired & wireless internet
  - 2 miles from Mazak & 11 miles from airport
- 

Holiday Inn Express & Suites  
1055 Vandercar Way  
Florence, KY 41042  
859-817-0337  
**www.ihg.com/holidayinnexpress**

- \$104
  - Transportation To/From International Airport
  - Transportation To/From Mazak **by appointment**
  - Continental Breakfast
  - Free WiFi
  - Indoor heated pool
  - Fitness Center
  - 4.6 from Mazak & 4.9 from airport
- 

Home2 Suites Hilton  
7570 Woods Point Drive  
Florence, KY 41042  
859-746-1001  
**www.hilton.com/en/home2**

- \$104
  - Transportation To/From International Airport
  - Transportation To/From Mazak **by appointment**
  - Continental Breakfast
  - Free WiFi
  - Indoor Pool
  - Fitness Center
  - 4.0 miles from Mazak & 5.3 from airport
- 

Hyatt Place  
300 Meijer Dr  
Florence, KY 41042  
859-6471170  
**www.hyattplace.com**

- \$121
  - Transportation To/From International Airport
  - Indoor/Outdoor Pool, Fitness Room & Outdoor Running Trail
  - High speed internet
  - Continental Breakfast
  - 4.6 miles from Mazak & 6 from airport
- 

LaQuinta Inn & Suites  
350 Meijer Dr  
Florence, KY 41042  
859-282-8212**www.lq.com**

- \$92
- Transportation To/From International Airport **by appointment**
- Indoor Pool & Hot Tub, Fitness Center, Guest Laundry
- High speed wired & wireless internet
- Continental Breakfast
- 4.6 miles from Mazak & 6 from airport

Marriot Cincinnati Airport (Full Service)  
2395 Progress Drive  
Hebron, KY 41048  
859-334-4612 (contact Jennifer Directly)  
**www.marriott.com**

- \$179
  - Transportation To/From International Airport
  - Continental Breakfast
  - Indoor Pool
  - Fitness Center
  - 10.4 miles from Mazak & .7 miles from airport
- 

Spring Hill Suites/Marriott  
7492 Turfway Rd.  
Florence, KY 41042  
859-371-3388  
**www.marriott.com/cvgsf**

- \$119 Queen Suite code MSKA / King/King Suite MAZK
- Transportation To/From International Airport **by appointment**
- Transportation To/From Mazak
- Indoor Pool & Hot Tub, Fitness Center
- Valet laundry/dry cleaning & Guest laundry facilities
- High speed wired & wired internet
- 3 miles from Mazak & 6 from airport





7975 Foundation Drive  
Florence, KY 41042  
<http://www.mazakusa.com/>