Preparing for an Apprenticeship

Thank you for your interest in the IAM/Boeing Joint Apprenticeship Program. This packet contains the information needed to help you qualify to apply for an apprenticeship at Boeing in the Puget Sound area. Applicants must meet specific minimum qualifications in order to apply. These minimum qualifications may be met in one of two ways: either through vocational training or work experience.

Applications are available only during open application acceptance periods which are advertised in advance in the local Boeing News, the IAM District 751 Aero Mechanic and website (http://www.iam751.org/), the IAM/Boeing Joint Apprenticeship internal website (http://apprenticeship.web.boeing.com), and the IAM/Boeing Joint Programs external website: (http://www.iam-boeing.com/apprenticeship.cfm).

To be eligible to apply for a Puget Sound area IAM/Boeing Joint Apprenticeship, you must:

- be at least 18 years of age.
- be eligible for hire or rehire at Boeing in the Puget Sound area.
- have a GED or a high school diploma.
- have US Person status as defined by Boeing.
- meet specific defined vocational training or trade-related work experience requirements for the targeted apprenticeship program.
- be able to perform the physical requirements of the targeted apprenticeship. Industrial Electronic Maintenance Technician program applicants must also be able to distinguish between primary colors.
- must never have been enrolled in or completed an IAM/Boeing Joint Apprenticeship.

You may apply for only one apprenticeship trade. Accepted applications are valid for a period of two years from the first day of the advertised application period. Once expired, a complete new application must be submitted. Accepted applications may be updated during open application acceptance periods.

The Apprenticeship Program is administered by the IAM/Boeing Joint Apprenticeship Committee, comprised of six members from the IAM District 751, and six Boeing managers. Programs are 8,000 or 10,000 hours in length and include paid on-the-job training and unpaid classroom education. The first 20% of the on-the-job training is a probationary period. Apprentices attend school for 160 unpaid hours per school year (four hours per week) at the South Seattle Community College Georgetown Apprenticeship and Education Center.

Apprentice wages are defined in Article 17 of the Collective Bargaining Agreement between the IAM and Boeing. Apprentices begin at labor grade zero and advance one labor grade for every 1000 apprenticeship hours until completion at labor grade 8, 9, or 10, depending upon the trade. Apprentices are placed in their target job at the maximum rate upon graduation and receive a Journeyworker Certificate and Card - recognized worldwide.

The recruitment, selection, employment, and training of apprentices shall be without discrimination based upon race, color, religion, sex, age, sexual orientation, or national origin. Women and minorities are encouraged to apply.

Don't wait until the next application period is advertised before working to become qualified - start today!
Minimum Requirements

There are two ways to apply for the Apprenticeship Program: **Vocational Training** or **Work Experience**.

**Vocational Training:** To qualify through vocational training, complete all of the courses listed for each trade. All vocational training must be completed prior to submittal of an application. Please note that for all trades, all math requirements must have been completed and passed within the last 5 years. Additional credit is earned for trade-specific and trade-related work experience.

**Work Experience:** To qualify through work experience, the minimum requirement is one year of trade related work experience. For the Industrial Electronic Maintenance Technician program, two years of work experience is required. The experience can be in just one category or a total of any combination of the noted categories listed for each trade. In addition, work experience applicants must complete and pass the noted math requirements within the last 5 years. Additional credit is earned for trade-specific and trade-related vocational training.

On the following pages are the requirements for each trade. Locate your desired trade and determine your qualifying method: Vocational Training or Work Experience. Note the requirements carefully; each requirement must be met or your application will not be accepted.

For answers to questions or additional information, please contact:

IAM/Boeing Joint Apprenticeship Office: PO Box 3707, MC 5X-12, Seattle WA 98124-2207
Office: 253-657-2518. email: apprenticeship@boeing.com.
Internal Web: [http://apprenticeship.web.boeing.com](http://apprenticeship.web.boeing.com);

QTTP: Contact QTTP and ask to meet with an Advisor (current and eligible former employees only).

Monday-Friday 8:00 am to 5:00 pm. Office: 206-763-1300 or 1-800-763-1301

Current and eligible former Boeing employees may apply for tuition assistance for non-Boeing classes prior to the course start date. Required courses taken at locations other than Boeing may qualify as an equivalent to those noted. Please contact the following for more information regarding course test challenges, course equivalents, or tuition assistance:

Boeing IAM Members: Quality Through Training Program (QTTP)

Current and eligible former Boeing employees may challenge tests. For paper based and hands-on challenge tests, visit any ERT Lab noted at [http://hr.web.boeing.com/index.aspx?com=15&id=146](http://hr.web.boeing.com/index.aspx?com=15&id=146). No appointment is necessary, but you should allow 2 to 3 hours for testing. Passing a challenge test is considered the equivalent of taking and passing the course. Or, for paper based only challenge tests, contact one of the QTTP locations noted above and make an appointment. If the challenge test requires a hands-on component (such as Precision Measuring Tools Basic) you may take the challenge test at an ERT Lab.

Boeing Non-IAM Members: Learning Together Program
Note: Salaried employees may use the Employee Requested Transfer (ERT) self-paced labs to challenge tests for apprenticeship required courses.

For non-Boeing applicants, classes may be taken or challenged at a local community or technical college. A grade of "C" or better is required unless the course is pass/fail. Documentation for all challenges and/or course completions must be included with your application.

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Blue Streak Mechanic
Term: 8,000 hours, 4 years (7,360 on-the-job hours and 640 school hours)
Target Job: 14308 Blue Streak Mechanic

Blue Streak Mechanics fabricate details and assemblies by hand or other mechanical means to support production and/or airline AOG or critical spares requirements. When prints, templates, or tools are not available, develop and fabricate complex temporary shop aid templates and tools, which may include forming compound curvatures and angles to support part fabrication. Accomplishment of the above tasks requires regular use of obsolete blueprints, advanced shop math, trigonometry, descriptive geometry (layout and lofting), geometric dimensioning and tolerancing, and computer aided design data such as CATIA DIREC.T.

☐ I plan to qualify through Vocational Training. All courses must be completed before submitting an application.

☐ Basic Blueprint Reading or ☐ Machine Blueprint Reading
☐ Basic Precision Measuring Tools
☐ Windows XP Basics or Windows 7 Basics
☐ Basic Math Level 2*
☐ Algebra Level 2*
☐ Geometry*
☐ Trigonometry*

* Credit for this math class may also be obtained by successfully passing the associated module in the 4-part IAM/Boeing Math Assessment. All math classes and/or the Math Assessment must have been completed and passed within the last 5 years of application.

See the http://www.iam-boeing.com website for the Math Assessment schedule and information.

Any course of equivalent content is an acceptable substitute to the Boeing offered courses. Many local community or technical colleges have similar courses. For Boeing employees, most courses can be challenged at any QTTP location or ERT Self-Paced Lab. A grade of "C" or better is required unless the course is pass/fail. Documentation for all challenges and/or course completions must be included with your application.

☐ I plan to qualify through Vocational Training. An alternate method to meet the Blue Streak Mechanic minimum vocational training requirements is to complete the Aerospace Composite Technician certificate program through Clover Park Technical College at the South Hill Puyallup campus. See http://www.cptc.edu/aerospace for details.

☐ I plan to qualify through Work Experience. One year of trade related work experience and the four math classes noted above are required. Examples of some trade related work experience are listed below. The one-year minimum requirement may be composed of a combination of trade related work experiences. Documentation for all work experience must be included with your application.

Work Experience Examples:
- Mills (Conventional, NC, CNC, Profile)
- Boring Mills (Vertical, Horizontal)
- Lathes (Conventional, NC, CNC, Turret)
- Drills (Radial, Press, NC)
- Layout (Conventional, CMM)
- Jig Bore, Jig Grinder
- Grinding (Internal, External, Surface, Thread)
- Computer Numerical Control
- Tool Grind
- Heat Treat
- Trade Related Bench Work

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Cellular Manufacturing Machinist
Term: 8,000 hours, 4 years (7,360 on-the-job hours and 640 school hours)
Target Jobs: 73809 FMS Operator, N0309 General Machinist, C3809 Machinist Assembler Precision

Cellular Manufacturing Machinists set up and operate various conventional and numerical control machine tools to fabricate close tolerance, high quality parts from metals, plastics, and composite materials in a cellular manufacturing environment. In addition to machine training, the Cellular Manufacturing Machinist apprenticeship includes use of precision measuring tools, trade related bench work, inspection, numerical machine programming, heat treat, layout operations, tool grinding, and machine related processes.

☐ I plan to qualify through Vocational Training. All courses must be completed before submitting an application.

☐ Basic Blueprint Reading or ☐ Machine Blueprint Reading
☐ Basic Precision Measuring Tools
☐ Windows XP Basics or Windows 7 Basics
☐ Milling Machine (a minimum of an 80-hour course is suggested)
☐ Lathe (a minimum of an 80-hour course is suggested)
☐ Basic Math Level 2*
☐ Algebra Level 2*
☐ Geometry*
☐ Trigonometry*

* Credit for this math class may also be obtained by successfully passing the associated module in the 4-part IAM/Boeing Math Assessment. All math classes and/or the Math Assessment must have been completed and passed within the last 5 years of application.

See the [http://www.iam-boeing.com](http://www.iam-boeing.com) website for the Math Assessment schedule and information.

Any course of equivalent content is an acceptable substitute to the Boeing offered courses. Many local community or technical colleges have similar courses. For Boeing employees, most courses can be challenged at any QTTP location or ERT Self-Paced Lab. A grade of "C" or better is required unless the course is pass/fail. Documentation for all challenges and/or course completions must be included with your application.

☐ I plan to qualify through Work Experience. One year of trade related work experience and the four math classes noted above are required. Examples of some trade related work experience are listed below. The one-year minimum requirement may be composed of a combination of trade related work experiences. Documentation for all work experience must be included with your application.

Work Experience Examples:
Mills (Conventional, NC, CNC, Profile)
Boring Mills (Vertical, Horizontal)
Lathes (Conventional, NC, CNC, Turret)
Drills (Radial, Press, NC)
Layout (Conventional, CMM)
Jig Bore, Jig Grinder
Grinding (Internal, External, Surface, Thread)
Computer Numerical Control
Tool Grind
Heat Treat
Trade Related Bench Work
Composite Manufacturing Technician
Term: 8,000 hours, 4 years (7,360 on-the-job hours and 640 school hours)
Target Job: 74808 Composite Manufacturing Technician


☐ I plan to qualify through Vocational Training. All courses must be completed before submitting an application.

☐ Basic Blueprint Reading or ☐ Machine Blueprint Reading
☐ Basic Precision Measuring Tools
☐ Windows XP Basics or Windows 7 Basics
☐ Introduction to Composites
☐ Basic Math Level 2*
☐ Algebra Level 2*
☐ Geometry*
☐ Trigonometry*

* Credit for this math class may also be obtained by successfully passing the associated module in the 4-part IAM/Boeing Math Assessment. All math classes and/or the Math Assessment must have been completed and passed within the last 5 years of application.

See the [http://www.iam-boeing.com](http://www.iam-boeing.com) website for the Math Assessment schedule and information.

Any course of equivalent content is an acceptable substitute to the Boeing offered courses. Many local community or technical colleges have similar courses. For Boeing employees, most courses can be challenged at any QTTP location or ERT Self-Paced Lab. A grade of "C" or better is required unless the course is pass/fail. Documentation for all challenges and/or course completions must be included with your application.

☐ I plan to qualify through Vocational Training. An alternate method to meet the Blue Streak Mechanic minimum vocational training requirements is to complete the Aerospace Composite Technician certificate program through Clover Park Technical College at the South Hill Puyallup campus. See [http://www.cptc.edu/aerospace](http://www.cptc.edu/aerospace) for details.

☐ I plan to qualify through Work Experience. One year of trade related work experience and the four math classes noted above are required. Examples of some trade related work experience are listed below. The one-year minimum requirement may be composed of a combination of trade related work experiences. Documentation for all work experience must be included with your application.

**Work Experience Examples:**
Mills (Conventional, NC, CNC, Profile)
Hand or Automated Lay-up
Hand Finish; De-Burr Machine
Assembly/Bench Work
Saw/Drills; Shaper
Drape Forming
Compaction; Fiber Placement
Bulk Resin Infusion; Noodle Fabrication
Tracker Leveling/Laser Radar
Layout; Forming or Straightening
Shot Peen Operator
Bagging/Thermal Couples
Tool Prep/Clean/Mold Release
De-Bag; Autoclave/Oven
Heat Blankets; Automated Water Jet
Industrial Electronic Maintenance Technician

Term: 10,000 hours, 5 years (9,200 on-the-job hours and 800 school hours)
Target Jobs: 87110 Electronic Technician Infrastructure Maintenance
           87210 Electronic Technician Precision Machine Tool Maintenance

Electronic Maintenance Technicians install, diagnose, repair, maintain, rework, modify, test, and calibrate electronic and/or electrical systems related to plant facilities, process support equipment, and production machinery. The Electronic Maintenance Technician apprentice training includes analog and digital circuits, electrical and electronic test equipment, computer systems, process control systems, robotics, computer numerically controlled equipment, motor controllers, AC circuits, electrical safety, and techniques for troubleshooting and analyzing complex electronic circuits.

☐ I plan to qualify through Vocational Training. All courses must be completed before submitting an application.

☐ Basic Blueprint Reading or ☐ Machine Blueprint Reading
☐ Basic Precision Measuring Tools
☐ Windows XP Basics or Windows 7 Basics
☐ Basic Electricity
☐ Electrical Relay Logic**
☐ PLC Fundamentals or ☐ Numerical Control Familiarization**
☐ Reading Schematics**
☐ Basic Math Level 2*
☐ Algebra Level 2*
☐ Geometry*
☐ Trigonometry*

* Credit for this math class may also be obtained by successfully passing the associated module in the 4-part IAM/Boeing Math Assessment. All math classes and/or the Math Assessment must have been completed and passed within the last 5 years of application.

** Similar courses are available at Tooling U (http://www.toolingu.com/default.aspx)

Any course of equivalent content is an acceptable substitute to the Boeing offered courses. Many local community or technical colleges have similar courses. For Boeing employees, most courses can be challenged at any QTTP location or ERT Self-Paced Lab. A grade of "C" or better is required unless the course is pass/fail. Documentation for all challenges and/or course completions must be included with your application.

☐ I plan to qualify through Work Experience. Two years of trade related work experience and the four math classes noted above are required. Examples of some trade related work experience are listed below. The two-year minimum requirement may be composed of a combination of trade related work experiences. Documentation for all work experience must be included with your application.

Work Experience Examples:
A & P Mechanic
Broadcast Technician
Communications Technician
Electrician
Computer Controlled Machine Technician
Controls Technician
Electrical/Electronics Technician
Machine Tool Maintenance Mechanic
Robotics Technician
Electronics Calibration Lab Technician
HVAC Technician
Industrial Maintenance Technician
Instrumentation Technician
Machine Rebuild
Semiconductor Plant Maintenance Technician

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Machine Tool Maintenance Mechanic

Term: 8,000 hours, 4 years (7,360 on-the-job hours and 640 school hours)
Target Job: 89509 Machine Repair Mechanic A

Machine Tool Maintenance Mechanics perform repairs, alignments, modifications, preventative maintenance and predictive maintenance on various types of production machinery and process support equipment. The Machine Tool Maintenance Mechanic apprentice training includes basic machine operations, machine lubrication, machine alignment, hydraulic and pneumatic systems, precision measuring equipment, hand and power tools, automated test equipment, and safety training in all aspects of machine maintenance.

☐ I plan to qualify through Vocational Training. All courses must be completed before submitting an application.

☐ Basic Blueprint Reading or ☐ Machine Blueprint Reading
☐ Basic Precision Measuring Tools
☐ Windows XP Basics or Windows 7 Basics
☐ Milling Machine (a minimum of an 80-hour course is suggested)
☐ Lathe (a minimum of an 80-hour course is suggested)
☐ Mechanical Maintenance: Lubricants**
☐ Mechanical Maintenance: Bearings: Select and Maintain**
☐ Mechanical Maintenance: Mechanical Maintenance: Lubricants**
☐ Algebra Level 2*

* Credit for this math class may also be obtained by successfully passing the Algebra module in the 4-part IAM/Boeing Math Assessment. All math classes and/or the Math Assessment must have been completed and passed within the last 5 years of application. See the http://www.iam-boeing.com website for the Math Assessment schedule and information.

** Similar courses are available at Tooling U (http://www.toolingu.com/default.aspx)

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☐ I plan to qualify through Work Experience. One year of trade related work experience and the math class noted above is required. Examples of some trade related work experience are listed below. The one-year minimum requirement may be composed of a combination of trade related work experiences. Documentation for all work experience must be included with your application.

Work Experience Examples:
Maintenance Oiler
Mills (Conventional, NC, CNC, Profile)
Lathes (Conventional, NC, CNC, Turret)
Machine Rebuild
Portable Tool Repair
Mechanic (Maintenance, Automotive, Airframe)
A & P Mechanic
Layout (Conventional, CMM)
Precision Inspection
CNC Programming
**Maintenance Machinist**

Term: 8,000 hours, 4 years (7,360 on-the-job hours and 640 school hours)

Target Job: 89709 Maintenance Machinist A

Perform all necessary bench and machine operations to make new machines or new and replacement parts for the rebuilding of precision-built fabrication machines and machine tools. Breakdown and sequence work assignments to insure proper machining and assembly operations. Devise, improvise and fabricate facilities equipment to accomplish work. Perform work in other maintenance classifications when incidental but necessary to accomplish assignments.

☐ I plan to qualify through Vocational Training. All courses must be completed before submitting an application.

- Basic Blueprint Reading or Machine Blueprint Reading
- Basic Precision Measuring Tools
- Windows XP Basics or Windows 7 Basics
- Milling Machine (a minimum of an 80-hour course is suggested)
- Lathe (a minimum of an 80-hour course is suggested)
- Mechanical Maintenance: Lubricants**
- Bearings: Select and Maintain**
- Basic Math Level 2*
- Algebra Level 2*
- Geometry*
- Trigonometry*

* Credit for this math class may also be obtained by successfully passing the associated module in the 4-part IAM/Boeing Math Assessment. All math classes and/or the Math Assessment must have been completed and passed within the last 5 years of application.

See the [IAM-Boeing.com](http://www.iam-boeing.com) website for the Math Assessment schedule and information.

** Similar courses are available at Tooling U ([http://www.toolingu.com/default.aspx](http://www.toolingu.com/default.aspx)).

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☐ I plan to qualify through Work Experience. One year of trade related work experience and the four math classes noted above are required. Examples of some trade related work experience are listed below. The one-year minimum requirement may be composed of a combination of trade related work experiences. Documentation for all work experience must be included with your application.

**Work Experience Examples:**

- Maintenance Oiler
- Mills (Conventional, NC, CNC, Profile)
- Lathes (Conventional, NC, CNC, Turret)
- Machine Rebuild
- Portable Tool Repair
- Mechanic (Maintenance, Automotive, Airframe)
- A & P Mechanic
- Layout (Conventional, CMM)
- Precision Inspection
- CNC Programming
- Boring Mills (Vertical, Horizontal)
- Jig Bore, Jig Grinder
- Drills (Radial, Press, NC)
- Grinding (Internal, External, Surface, Thread)
- Heat Treat
- Trade Related Bench Work
**Metal Structure Robotics Technician**

Term: 8,000 hours, 4 years (7,360 on-the-job hours and 640 school hours)

Target Jobs: 17208 Metal Structures Technician

In a product cell, utilizing predetermined setups and operating methods, adjust and simultaneously operate a variety of numerically controlled and/or conventional equipment capable of performing various functions such as, but not limited to, forming, bonding, welding, machining, drilling, cutting, robotic and otherwise automated and/or manual assembly.

☐ I plan to qualify through **Vocational Training**. All courses must be completed before submitting an application.

☐ Basic Blueprint Reading or ☐ Machine Blueprint Reading
☐ Basic Precision Measuring Tools
☐ Windows XP Basics or Windows 7 Basics
☐ Basic Math Level 2*
☐ Algebra Level 2*
☐ Geometry*
☐ Trigonometry*

* Credit for this math class may also be obtained by successfully passing the associated module in the 4-part IAM/Boeing Math Assessment. All math classes and/or the Math Assessment must have been completed and passed within the last 5 years of application.

See the [http://www.iam-boeing.com](http://www.iam-boeing.com) website for the Math Assessment schedule and information.

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☐ I plan to qualify through **Work Experience**. One year of trade related work experience and the four math classes noted above are required. Examples of some trade related work experience are listed below. The one-year minimum requirement may be composed of a combination of trade related work experiences. Documentation for all work experience must be included with your application.

**Work Experience Examples:**
Mills (Conventional, NC, CNC, Profile)
Boring Mills (Vertical, Horizontal)
Lathes (Conventional, NC, CNC, Turret)
Drills (Radial, Press, NC)
Layout (Conventional, CMM)
Jig Bore, Jig Grinder
Grinding (Internal, External, Surface, Thread)
Computer Numerical Control
Tool Grind
Heat Treat
Trade Related Bench Work
Model Maker
Term: 8,000 hours, 4 years (7,360 on-the-job hours and 640 school hours)
Target Job: 03609 Model Maker B

Model Makers machine, fabricate, and assemble close tolerance, high quality aircraft models and components for testing in wind tunnels. Models are constructed of metals, plastics, and composite materials. The Model Maker apprentice, in addition to conventional and NC machine operation training, also includes the use of precision measuring tools, plaster and plastic tooling, layout, elementary electronics, numerical machine programming, model construction, assembly, testing and wind tunnel maintenance.

☐ I plan to qualify through Vocational Training. All courses must be completed before submitting an application.

☐ Basic Blueprint Reading or ☐ Machine Blueprint Reading
☐ Reading Tooling Blueprints
☐ Basic Precision Measuring Tools
☐ Windows XP Basics or Windows 7 Basics
☐ Milling Machine (a minimum of an 80-hour course is suggested)
☐ Lathe (a minimum of an 80-hour course is suggested)
☐ Basic Math Level 2*
☐ Algebra Level 2*
☐ Geometry*
☐ Trigonometry*

* Credit for this math class may also be obtained by successfully passing the associated module in the 4-part IAM/Boeing Math Assessment. All math classes and/or the Math Assessment must have been completed and passed within the last 5 years of application.

See the http://www.iam-boeing.com website for the Math Assessment schedule and information.

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☐ I plan to qualify through Work Experience. One year of trade related work experience and the four math classes noted above are required. Examples of some trade related work experience are listed below. The one-year minimum requirement may be composed of a combination of trade related work experiences. Documentation for all work experience must be included with your application.

Work Experience Examples:
Mills (Conventional, NC, CNC, Profile)
Boring Mills (Vertical, Horizontal)
Lathes (Conventional, NC, CNC, Turret)
EDM Operator (Wire Feed, Non-Wire Feed)
Wind Tunnel Maintenance
Trade Related Plastics or Plaster
Grinding (Internal, External, Surface, Thread)
Remote Terminal
Jig Bore, Jig Grinder
Planers, Part Railing, Saws
Machine Layout
Heat Treat, Woodworking
Electrical (Elementary)
Trade Related Bench Work
Inspection, Machine/Detail Fabrication
Model Construction (Finish, Install, Test)
NC Spar Mill Operator

Term: 8,000 hours, 4 years (7,360 on-the-job hours and 640 school hours)
Target Job: 17908 Spar Mill Operator A NC

NC Spar Mill Operators machine close tolerance, high quality spars for aircraft assembly. A graduate NC Spar Mill Operator will have the knowledge of all facets of spar fabrication. An NC Spar Mill Operator apprentice receives training in all phases of conventional and NC/CNC milling machines, including skin and spar mills and layout, shot peen operations, hand work, heat treat, tank lines, assembly, prep, and spar handling processes.

☐ I plan to qualify through Vocational Training. All courses must be completed before submitting an application.

☐ Basic Blueprint Reading or ☐ Machine Blueprint Reading
☐ Basic Precision Measuring Tools
☐ Windows XP Basics or Windows 7 Basics
☐ Milling Machine (a minimum of an 80-hour course is suggested)
☐ Lathe (a minimum of an 80-hour course is suggested)
☐ Basic Math Level 2*
☐ Algebra Level 2*
☐ Geometry*
☐ Trigonometry*

* Credit for this math class may also be obtained by successfully passing the associated module in the 4-part IAM/Boeing Math Assessment. All math classes and/or the Math Assessment must have been completed and passed within the last 5 years of application.

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☐ I plan to qualify through Work Experience. One year of trade related work experience and the four math classes noted above are required. Examples of some trade related work experience are listed below. The one-year minimum requirement may be composed of a combination of trade related work experiences. Documentation for all work experience must be included with your application.

Work Experience Examples:
Mills (Conventional, NC, CNC, Profile)
Mills (Spar, Skin, Pull-Through)
Drill Router (NC, CNC)
Hand Drill Operator
Crane Operator
Tank Line
Tool and Cutter Grinder
Assembly & Prep
Layout
Forming, Straightening
Checking Fixture
Heat Treat
Material Store
Shot Peen Operator
Hand Sand (Spar, Skin)
De-Burr Machine Operator
Tool and Cutter Grinder
Term: 8,000 hours, 4 years (7,360 on-the-job hours and 640 school hours)
Target Job: 40708 Tool Grinder A

Tool & Cutter Grinders set up and operate a variety of conventional and CNC machines to modify, fabricate, and re-sharpen precision, high quality machine cutting tools to tight tolerance specifications. Tool & Cutter Grinder apprentices receive training in all aspects of the Tool and Cutter Grind trade, including a wide variety of drill/reamer grinding, high speed cutting tools, and carbide cutting tools utilizing conventional universal tool and cutter grind equipment, and CNC tool and cutter grind machines. Tool and Cutter Grind apprentices also receive training on our new state of the art CemeCon tool coating process, as well as learn most aspects of the Cutting Tool business.

☐ I plan to qualify through Vocational Training. All courses must be completed before submitting an application.

☐ Basic Blueprint Reading or ☐ Machine Blueprint Reading
☐ Basic Precision Measuring Tools
☐ Windows XP Basics or Windows 7 Basics
☐ Milling Machine (a minimum of an 80-hour course is suggested)
☐ Lathe (a minimum of an 80-hour course is suggested)
☐ Basic Math Level 2*
☐ Algebra Level 2*
☐ Geometry*
☐ Trigonometry*

* Credit for this math class may also be obtained by successfully passing the associated module in the 4-part IAM/Boeing Math Assessment. All math classes and/or the Math Assessment must have been completed and passed within the last 5 years of application.

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☐ I plan to qualify through Work Experience. One year of trade related work experience and the four math classes noted above are required. Examples of some trade related work experience are listed below. The one-year minimum requirement may be composed of a combination of trade related work experiences. Documentation for all work experience must be included with your application.

Work Experience Examples:
Mills (Conventional, NC, CNC, Profile)
Boring Mills (Vertical, Horizontal)
Lathes (Conventional, NC, CNC, Turret)
Drills (Radial, Press, NC)
Layout (Conventional, CMM)
Jig Bore, Jig Grinder
Grinding (Internal, External, Surface, Thread)
Computer Numerical Control
Tool Grind
Heat Treat
Trade Related Bench Work
Suggested Milling Machine and Lathe Courses

These local technical colleges offer milling machine and lathe courses based upon demand. Please verify all course information by contacting the college instructor several weeks prior to enrolling. This course information is a guide and may be out-of-date. All courses listed here meet our milling and lathe requirements. Current and eligible former Boeing employees may contact QTTP to request a voucher to reimburse course costs.

**Bates Technical College**
MACH 089 (80 hours) Milling Machine or Lathe (select one subject; take the course twice to learn both)
Instructors: Bob Storrar, 253-680-7258, bstorrar@bates.ctc.edu or Barry Young, 253-680-7214, byoung@bates.ctc.edu

**Bellingham Technical College**
3028 Lindbergh Ave., Bellingham, WA 98225, http://www.btc.ctc.edu, 360-752-7000
MACH 119 (90 hours) Machine Fundamentals IA and MACH 119 (90 hours) Machine Fundamentals IB
Instructor: Sherrie Anderson, 360-752-8444, sanderson@btc.ctc.edu

**Clover Park Technical College**
4500 Steilacoom Blvd. SW, Lakewood, WA 98499, http://www.cptc.edu, 253-589-5800
MCH 117 (80 hours) Lathe 1 and MCH 121 (80 hours) Mills 1
Instructor: Ken Dam, 253-589-5657, ken.dam@cptc.edu

**Green River Community College**
12401 SE 320th Street, Auburn, WA 98092-3622, http://www.greenriver.edu, 253-833-9111
MFG 117 (80 hours) Conventional Milling level 1 and MFG 118 (80 hours) Conventional Turning level 1
Instructor: Tom Tagliente, 253-833-9111 ext. 4261, ttagliente@greenriver.edu

**Lake Washington Technical College**
11605 132nd Avenue NE, Kirkland, WA 98034-8506, http://www.lwtc.ctc.edu, 425-739-8100
MACH 110 (110 hours) covers both lathe and milling.
Instructor: Mike Clifton, 425-739-8357, ext. 357, mike.clifton@lwtc.edu

**Renton Technical College**
3000 NE Fourth Street, Renton, WA 98056-4195, http://www.rtc.edu, 425-235-2352
MTECS 113 (80 hours) Machining Lathe and MTECS 115 (80 hours) Machining Milling
Instructor: Tom Uchison, 425-235-2475, tuchison@rtc.edu
Note: RTC often provides a Saturday-only class ideal for 2nd shift employees.

**Shoreline Community College**
MFGT113 (300 hours) Lathe, Milling Machine, and CNC
Instructor: Keith Smith, 206-546-6969, ksmith2@shoreline.edu

"Apprenticeship… The original four year degree."

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