



IAM/Boeing :: Joint Programs

Apprenticeship Program - Puget Sound



Latest Update: October 2018

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**.

Candidates may apply for apprenticeships when jobs are posted throughout the year on the Boeing Careers website at <http://www.boeing.com/careers>. A Boeing Careers tip sheet and other documents to assist candidates with the application process are available at <http://www.iam-boeing-apprenticeship.com>.

Application acceptance dates are advertised in advance in several local Boeing news sources, the IAM District 751 Aero Mechanic newsletter, the IAM District 751 website (<http://www.iam751.org>), and the IAM/Boeing Joint Apprenticeship internal website (<http://apprenticeship.web.boeing.com>) and external website (<http://www.iam-boeing-apprenticeship.com>). We accept applications throughout the year, but please note that not all of our trades are available during each hiring event. We advertise positions as they become available.

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.
- be a high school graduate (or equivalent). If proof of graduation cannot be provided, a 2- or 4-year degree is acceptable.
- have US Person status as defined by Boeing (see FAQ).
- meet specific defined vocational training or trade-related work experience requirements.
- be able to perform the physical requirements of the targeted apprenticeship. Please note: Industrial Electronic Maintenance Technician applicants must be able to distinguish between primary colors.
- never have been enrolled in or completed an IAM/Boeing Joint Apprenticeship.

The Apprenticeship Program is administered by the IAM/Boeing Joint Apprenticeship Committee, comprised of equal numbers of IAM District 751 and Boeing Company representatives. 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 a minimum of 144 unpaid hours per school year (four hours per week) at South Seattle College Georgetown Apprenticeship and Education Center.

Boeing is an Equal Opportunity Employer. Employment decisions are made without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, veteran status or other characteristics protected by law. Women and minorities are encouraged to apply.

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

Apprentice Wage Rates

Apprentice wages are defined in Article 17 of the Collective Bargaining Agreement between the IAM and Boeing. Wages are updated each September. 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 the target job at the maximum rate upon graduation and receive a Journey-worker Certificate and Card – recognized worldwide.

The chart below shows the base rate of pay for apprentices, effective **September , 201** . Target job codes end in a 08, 09, or 10 and are located on the following trade specific pages. All apprenticeships are full time jobs provided by The Boeing Company and represented by the IAM District 751 Union.

Minimum Requirements

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

Vocational Training: To qualify through vocational training, all courses listed for the trade must be complete before applying. Courses with equivalent content are acceptable. Additional consideration is given for trade-specific and trade-related work experience. A score of at least 80% is required for all Boeing classes or challenge tests; a grade of “C” or better for all educational transcripts; a pass is required for pass/fail courses.

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 are required. The experience can be in just one category or a total of any combination of the noted categories listed for each trade. Additional consideration is given for trade-specific and trade-related vocational training.

Assessment Placement Results Required

All applicants must complete an Assessment or course within the last 5 years at their local Washington State community or technical college. The applicant must have minimum placement results or course completion as follows: Math Intermediate Algebra, English 90. An Assessment may be completed prior to the time of application, but no later than 14 days following a request for document verification.

Documentation for all course completions, test challenges, and the assessment placement results must be provided upon request. Any course of equivalent content is an acceptable substitute to the noted courses. All vocational training, including the assessment results must be completed prior to applying.

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.

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

Potential Locations: Everett, Renton, and Auburn

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 DIRRECT.

I plan to qualify through Vocational Training. All courses must be completed before applying.

- Basic Blueprint Reading or Machine Blueprint Reading
- Basic Precision Measuring Tools
- All applicants must complete an assessment or course within the last 5 years at their local Washington State community or technical college. The applicant must have minimum placement results or course completion as follows: Math Intermediate Algebra, English 90. An Assessment may be completed prior to the time of application, but no later than 14 days following a request for document verification.

A passing score of at least 80% is required for all Boeing classes or challenge tests and a grade of "C" or better for all educational transcripts. Boeing employees can challenge most courses at any ERT Self-Paced Lab. Documentation for all course completions, test challenges, and Assessment placement results must be provided upon request and completed prior to applying. Any course of equivalent content is an acceptable substitute to the noted courses.

I plan to qualify through Vocational Training. An alternate method to meet the Blue Streak Mechanic minimum vocational training requirements is to complete a certificate program that contains equivalent content to the acceptable Composite certificate programs noted below and assessment placement or course results noted above.

- The Aerospace Composite Technician Certificate program. Clover Park Technical College, South Hill Puyallup campus. See <http://www.cptc.edu/aerospace> for details.
- The Composite Technician Certificate program. Edmonds Community College. See <http://www.edcc.edu/programs/stem/etec/composites/default.html> for details.
- The Aerospace Composite Technician Certificate program. Everett Community College. See <http://www.everettcc.edu/composites> or <http://www.everettcc.edu/mfg> for details.
- The Aviation Composites Certificate program. South Seattle College, South campus. See <http://www.southseattle.edu/programs> for details
- The Aerospace Composite Technology program, North Idaho College. See <http://www.nic.edu/programs/viewprogram.aspx?landing=208> for details.
- The Composites Manufacturing Technology program, Olympic College. For details, see: <http://www.olympic.edu/Students/DegreesCertificates/Manufacturing+Technology/compositesmanufacturing-CC.htm>.

I plan to qualify through Work Experience. **One** year of trade related work experience **and** assessment placement or course results noted above. 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. A resume listing your work experience must be available upon request.

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
Computer Numerical Control
Tool Grind
Heat Treat
Trade Related Bench Work

Work Experience Examples:

Grinding (Internal, External, Surface, Thread)
Forming (Roll, Hydro, Stretch, or Brake)
Sheet Metal Assembly, Sheet Metal Details
Layout & Lofting (Sheet Metal, Non-Metallic, Composite)
Flight Control/Control Surface Repair (Flaps, Rudders, Slats)
Fastener Removal (Rivets, Hylocs, Screws, etc.)
Relocating, re-drilling, and reaming holes to size
Tooling, Tool Making
Duct Prep and Fit (for Weld)
Bench Mechanic

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

Potential Locations: Tukwila and Frederickson

Composite Manufacturing Technicians will learn a wide range of composite processes and work on composite equipment at Frederickson and the Developmental Center. The on-the-job training skills include general, pre-cure, cure, trim, and assembly. Computer skills include Windows Navigation, Microsoft Desktop Applications, Computing Systems, Specific Application Navigation, Drawing/Blue Print, Redars navigation, On Line Work Instructions, Sketches, CATIA V5, MSDS Navigation, Specification Boeing Production System, and MAPS.

I plan to qualify through Vocational Training. All courses must be completed before applying.

- Basic Blueprint Reading or Machine Blueprint Reading
- Basic Precision Measuring Tools
- Introduction to Composites
- CNC Machining (a minimum of an 80-hour course is suggested)
See the last page for examples of approved CNC, milling machine, and lathe courses.
- All applicants must complete an assessment or course within the last 5 years at their local Washington State community or technical college. The applicant must have minimum placement results or course completion as follows: Math Intermediate Algebra, English 90. An Assessment may be completed prior to the time of application, but no later than 14 days following a request for document verification.

A passing score of at least 80% is required for all Boeing classes or challenge tests and a grade of "C" or better for all educational transcripts. Boeing employees can challenge most courses at any ERT Self-Paced Lab. Documentation for all course completions, test challenges, and Assessment scores must be provided upon request and completed prior to applying. Any course of equivalent content is an acceptable substitute to the noted courses.

I plan to qualify through Vocational Training. An alternate method to meet the Composite Manufacturing Technician minimum vocational training requirements is to complete a certificate program that contains equivalent content to the acceptable Composite certificate programs noted below and assessment placement or course results noted above.

- The Aerospace Composite Technician Certificate program. Clover Park Technical College, South Hill Puyallup campus. See <http://www.cptc.edu/aerospace> for details.
- The Composite Technician Certificate program. Edmonds Community College.
See <http://www.edcc.edu/programs/stem/etec/composites/default.html> for details.
- The Aerospace Composite Technician Certificate program. Everett Community College.
See <http://www.everettcc.edu/composites> or <http://www.everettcc.edu/mfg> for details.
- The Aviation Composites Certificate program. South Seattle College, South campus.
See <http://www.southseattle.edu/programs> for details
- The Aerospace Composite Technology program, North Idaho College.
See <http://www.nic.edu/programs/viewprogram.aspx?landing=208> for details.
- The Composites Manufacturing Technology program, Olympic College. For details, see:
<http://www.olympic.edu/Students/DegreesCertificates/Manufacturing+Technology/compositesmanufacturing-CC.htm>.

I plan to qualify through Work Experience. One year of trade related work experience and assessment placement or course results noted above. 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. A resume listing your work experience must be available upon request.

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

Work Experience Examples:

Bulk Resin Infusion; Noodle Fabrication
Tracker Leveling/Laser Radar
Layout; Forming or Straightening
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

Potential Locations: Everett, Renton, Seattle, Tukwila, Auburn, Frederickson

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 applying.

Basic electronic/electrical precision measuring tools, A few examples follow: measuring equipment includes but not limited to, digital multimeters, current clamp meters, oscilloscopes, meggers and surge testers, LCR meters, frequency meters, etc.

Basic Electricity or Basic Electronics

All applicants must complete an assessment or course within the last 5 years at their local Washington State community or technical college. The applicant must have minimum placement results or course completion as follows: Math Intermediate Algebra, English 90. An Assessment may be completed prior to the time of application, but no later than 14 days following a request for document verification.

A passing score of at least 80% is required for all Boeing classes or challenge tests and a grade of "C" or better for all educational transcripts. Boeing employees can challenge most courses at any ERT Self-Paced Lab. Documentation for all course completions, test challenges, and Assessment scores must be provided upon request and completed prior to applying. Any course of equivalent content is an acceptable substitute to the noted courses.

plan to qualify through Vocational Training. An alternate method to meet the Industrial Electronic Maintenance Technician minimum vocational training requirements is to complete a certificate program that contains **equivalent** content to the acceptable certificate program noted below and assessment placement or course results noted above.

Here are 2 examples of certificate/degree programs for reference

The 6-quarter; 91 credit Electronic Equipment Service Technician degree program. Bates Technical College, downtown Tacoma campus. See <http://www.bates.ctc.edu/EEST> for details.

The 7-quarter; 119 credit Industrial Electronics and Robotics Technician degree program. Bates Technical College, downtown Tacoma campus. See <http://www.bates.ctc.edu/IERT> for details.

plan to qualify through Work Experience. Two year of trade related work experience and assessment placement or course results noted above. Examples of some trade related work experience are listed below. The **two-years** minimum requirement may be composed of a combination of trade related work experiences. A resume listing your work experience must be available upon request.

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

Work Experience Examples:

HVAC Technician
Industrial Maintenance Technician
Instrumentation Technician
Machine Rebuild Technician
Semiconductor Plant Maintenance Technician
Fire Control Technician
Military Electrician and/or Technician
Postal Equipment Technician
Aircraft Simulator Technician
Industrial Maintenance Electrician or Technician

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

Potential Locations: Everett, Renton, Seattle, Tukwila, Auburn, Frederickson

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 applying.

- Basic Blueprint Reading
- Basic Precision Measuring Tools
- All applicants must complete an assessment or course within the last 5 years at their local Washington State community or technical college. The applicant must have minimum placement results or course completion as follows: Math Intermediate Algebra, English 90. An Assessment may be completed prior to the time of application, but no later than 14 days following a request for document verification.

Applicant must be skilled with Microsoft Office Basic (Word, Excel). A passing score of at least 80% is required for all Boeing classes or challenge tests and a grade of "C" or better for all educational transcripts. Boeing employees can challenge most courses at any ERT Self-Paced Lab. Documentation for all course completions, test challenges, and Assessment scores must be provided upon request and completed prior to applying. Any course of equivalent content is an acceptable substitute to the noted courses.

I plan to qualify through Vocational Training. An alternate method to meet the Machine Tool Maintenance Mechanic minimum vocational training requirements is to complete the courses noted below and assessment placement or course results noted above.

- Maintenance Mechatronics MTX 100 Mechatronics 1 (13)
Prerequisite: Eligible for ENGL 081, MATH 062, and READ 104; or instructor's permission.
Additional fee of \$50.00 (NR) 7077 U Pritchard P Kent Acad MTWTh 5-10p
and
MTX 110 Mechatronics 2 (13)
Prerequisite: MTX 100; and eligible for ENGL 081, MATH 062, and READ 104; or instructor's permission.
Additional fee of \$50.00 (NR) 7079 U Pritchard P Kent Acad MTWTh 5-10pX
<http://www.greenriver.edu/academics/areas-of-study/details/maintenance-mechatronics.htm>

I plan to qualify through Work Experience. **One** year of trade related work experience and assessment placement or course results noted above. 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. A resume listing your work experience must be available upon request.

Work Experience Examples:

Maintenance Oiler
Mills (Conventional, NC, CNC, Profile)
Lathes (Conventional, NC, CNC, Turret)
Any Factory Maintenance Repair work
Millwright

Work Experience Examples:

Machine Rebuild
Portable Tool Repair
A & P Mechanic
Mechanic (Maintenance, Automotive, Airframe, Fabrication)

Maintenance Machinist

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

Target Job: 89709 Maintenance Machinist A

Potential Locations: Auburn

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 applying.

- Basic Blueprint Reading or Machine Blueprint Reading
- Basic Precision Measuring Tools
- Milling Machine (a minimum of an 80-hour course is suggested)
- Lathe (a minimum of an 80-hour course is suggested)
See the last page for examples of approved milling machine and lathe courses.
- All applicants must complete an assessment or course within the last 5 years at their local Washington State community or technical college. The applicant must have minimum placement results or course completion as follows: Math Intermediate Algebra, English 90. An Assessment may be completed prior to the time of application, but no later than 14 days following a request for document verification.

A passing score of at least 80% is required for all Boeing classes or challenge tests and a grade of “C” or better for all educational transcripts. Boeing employees can challenge most courses at any ERT Self-Paced Lab. Documentation for all course completions, test challenges, and Assessment scores must be provided upon request and completed prior to applying. Any course of equivalent content is an acceptable substitute to the noted courses.

I plan to qualify through Vocational Training. An alternate method to meet the Maintenance Machinist minimum vocational training requirements is to complete the courses noted below and assessment placement or course results noted above.

- The Machine Maintenance 1 course at Green River Community College.
See <http://www.campusce.net/GreenRiver/course/course.aspx?C=1515&pc=184&mc=196&sc>
- Lathe (a minimum of an 80-hour course is suggested)

I plan to qualify through Work Experience. **One** year of trade related work experience and assessment placement or course results noted above. 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. A resume listing your work experience must be available upon request.

Work Experience Examples:

Mills (Conventional, NC, CNC, Profile)
Lathes (Conventional, NC, CNC, Turret)
Machine Rebuild
Portable Tool Repair
Certified A & P Mechanic
Layout (Conventional, CMM)

Work Experience Examples:

Grinding (Internal, External, Surface, Thread)
Machine Tool Maintenance Mechanic
Boring Mills (Vertical, Horizontal)
Jig Bore, Jig Grinder
Drills (Radial, Press, NC)

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

Potential Locations: Everett, Seattle, and Auburn

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, often in a cellular manufacturing environment. In addition to machine training, the 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 applying.

- Basic Blueprint Reading or Machine Blueprint Reading
- Basic Precision Measuring Tools
- Milling Machine (a minimum of an 80-hour course is suggested)
- Lathe (a minimum of an 80-hour course is suggested)

See the last page for examples of approved milling machine and lathe courses.

- All applicants must complete an assessment or course within the last 5 years at their local Washington State community or technical college. The applicant must have minimum placement results or course completion as follows: Math Intermediate Algebra, English 90. An Assessment may be completed prior to the time of application, but no later than 14 days following a request for document verification.

A passing score of at least 80% is required for all Boeing classes or challenge tests and a grade of “C” or better for all educational transcripts. Boeing employees can challenge most courses at any ERT Self-Paced Lab. Documentation for all course completions, test challenges, and Assessment scores must be provided upon request and completed prior to applying. Any course of equivalent content is an acceptable substitute to the noted courses.

I plan to qualify through Work Experience. **One** year of trade related work experience and assessment placement or course results noted above. 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. A resume listing your work experience must be available upon request.

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

Work Experience Examples:

Grinding (Internal, External, Surface, Thread)
Computer Numerical Control
Tool Grind
Heat Treat
Trade Related Bench Work

Metal Structures Technician

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

Target Jobs: 17208 Metal Structures Technician

Potential Locations: Auburn

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 applying.

- Basic Blueprint Reading or Machine Blueprint Reading
- Basic Precision Measuring Tools
- All applicants must complete an assessment or course within the last 5 years at their local Washington State community or technical college. The applicant must have minimum placement results or course completion as follows: Math Intermediate Algebra, English 90. An Assessment may be completed prior to the time of application, but no later than 14 days following a request for document verification.

A passing score of at least 80% is required for all Boeing classes or challenge tests and a grade of "C" or better for all educational transcripts. Boeing employees can challenge most courses at any ERT Self-Paced Lab. Documentation for all course completions, test challenges, and Assessment scores must be provided upon request and completed prior to applying. Any course of equivalent content is an acceptable substitute to the noted courses.

I plan to qualify through Work Experience. **One** year of trade related work experience and assessment placement or course results noted above. 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. A resume listing your work experience must be available upon request.

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

Work Experience Examples:

Grinding (Internal, External, Surface, Thread)
Computer Numerical Control
Tool Grind
Heat Treat
Trade Related Bench Work
Assembly

Model Maker

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

Target Job: 03609 Model Maker B

Potential Locations: Seattle

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 applying.

- Basic Blueprint Reading or Machine Blueprint Reading
- Basic Precision Measuring Tools
- Milling Machine (a minimum of an 80-hour course is suggested)
- Lathe (a minimum of an 80-hour course is suggested)

See the last page for examples of approved milling machine and lathe courses.

- All applicants must complete an assessment or course within the last 5 years at their local Washington State community or technical college. The applicant must have minimum placement results or course completion as follows: Math Intermediate Algebra, English 90. An Assessment may be completed prior to the time of application, but no later than 14 days following a request for document verification.

A passing score of at least 80% is required for all Boeing classes or challenge tests and a grade of “C” or better for all educational transcripts. Boeing employees can challenge most courses at any ERT Self-Paced Lab. Documentation for all course completions, test challenges, and Assessment scores must be provided upon request and completed prior to applying. Any course of equivalent content is an acceptable substitute to the noted courses.

I plan to qualify through Work Experience. **One** year of trade related work experience and assessment placement or course results noted above. 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. A resume listing your work experience must be available upon request.

Work Experience Examples:

Mills (Conventional, NC, CNC, Profile)
Boring Mills (Vertical, Horizontal)
Wind Tunnel Maintenance
Remote Terminal
Jig Bore, Jig Grinder
Part Railing, Saws
Machine Layout
Electrical (Elementary)

Work Experience Examples:

EDM Operator (Wire Feed, Non-Wire Feed)
Lathes (Conventional, NC, CNC, Turret)
Grinding (Internal, External, Surface, Thread)
Inspection, Machine/Detail Fabrication
Model Construction (Finish, Install, Test)
Trade Related Bench Work
Heat Treat, Woodworking

NC Skin Mill Operator

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

Target Job: 17709 NC Skin Mill Operator A

Potential Locations: Auburn and Frederickson

NC Skin Mill Operators machine close tolerance, high quality spars for aircraft assembly. A graduate NC Skin Mill Operator will have the knowledge of all facets of skin and spar fabrication. An NC Skin 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 applying.

- Basic Blueprint Reading or Machine Blueprint Reading
- Basic Precision Measuring Tools
- Milling Machine (a minimum of an 80-hour course is suggested)
- Lathe (a minimum of an 80-hour course is suggested)
See the last page for examples of approved milling machine and lathe courses.
- All applicants must complete an assessment or course within the last 5 years at their local Washington State community or technical college. The applicant must have minimum placement results or course completion as follows: Math Intermediate Algebra, English 90. An Assessment may be completed prior to the time of application, but no later than 14 days following a request for document verification.

A passing score of at least 80% is required for all Boeing classes or challenge tests and a grade of “C” or better for all educational transcripts. Boeing employees can challenge most courses at any ERT Self-Paced Lab. Documentation for all course completions, test challenges, and Assessment scores must be provided upon request and completed prior to applying. Any course of equivalent content is an acceptable substitute to the noted courses.

I plan to qualify through Work Experience. **One** year of trade related work experience and assessment placement or course results noted above. 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. A resume listing your work experience must be available upon request.

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

Work Experience Examples:

Layout
Forming, Straightening
Checking Fixture
Heat Treat
Material Store
Shot Peen Operator
Hand Sand (Spar, Skin)
De-Burr Machine Operator

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

Potential Locations: Auburn and Frederickson

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 applying.

- Basic Blueprint Reading or Machine Blueprint Reading
- Basic Precision Measuring Tools
- Milling Machine (a minimum of an 80-hour course is suggested)
- Lathe (a minimum of an 80-hour course is suggested)
See the last page for examples of approved milling machine and lathe courses.
- All applicants must complete an assessment or course within the last 5 years at their local Washington State community or technical college. The applicant must have minimum placement results or course completion as follows: Math Intermediate Algebra, English 90. An Assessment may be completed prior to the time of application, but no later than 14 days following a request for document verification.

A passing score of at least 80% is required for all Boeing classes or challenge tests and a grade of “C” or better for all educational transcripts. Boeing employees can challenge most courses at any ERT Self-Paced Lab. Documentation for all course completions, test challenges, and Assessment scores must be provided upon request and completed prior to applying. Any course of equivalent content is an acceptable substitute to the noted courses.

I plan to qualify through Work Experience. One year of trade related work experience and assessment placement or course results noted above. 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. A resume listing your work experience must be available upon request.

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

Work Experience Examples:

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

Potential Locations: Auburn

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 applying.

- Basic Blueprint Reading or Machine Blueprint Reading
- Basic Precision Measuring Tools
- Milling Machine (a minimum of an 80-hour course is suggested)
- Lathe (a minimum of an 80-hour course is suggested)

See the last page for examples of approved milling machine and lathe courses.

- All applicants must complete an assessment or course within the last 5 years at their local Washington State community or technical college. The applicant must have minimum placement results or course completion as follows: Math Intermediate Algebra, English 90. An Assessment may be completed prior to the time of application, but no later than 14 days following a request for document verification.

A passing score of at least 80% is required for all Boeing classes or challenge tests and a grade of “C” or better for all educational transcripts. Boeing employees can challenge most courses at any ERT Self-Paced Lab. Documentation for all course completions, test challenges, and Assessment scores must be provided upon request and completed prior to applying. Any course of equivalent content is an acceptable substitute to the noted courses.

I plan to qualify through Work Experience. **One** year of trade related work experience and assessment placement or course results noted above. 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. A resume listing your work experience must be available upon request.

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

Work Experience Examples:

Grinding (Internal, External, Surface, Thread)
Computer Numerical Control
Tool Grind
Heat Treat
Trade Related Bench Work

Tool & Die Maker

Term: 10,000 hours, 5 years (9,200 on-the-job hours and 800 school hours)

Target Job: 76010 Tool and Die/Deep Draw

Potential Locations: Auburn

Tool and Die Makers machine, plan, layout, fabricate, make, assemble, maintain and repair tools, dies, and molds. Tools and/or dies are constructed of metals, plastics and composite materials. The Tool and Die Maker apprentice, in addition to conventional and NC machine operation training, also includes the use of precision measuring tools, involving coordinated tolerances in more than one working plane and/or involving obtuse, acute or right angle construction; with dies such as push-through, blanking, piercing, cut-off, forming, joggle, deep, and compound dies, numerical machine programming. Assembly of tools and/or dies may include the creation and repair of pneumatics, hydraulic plumbing, and performing functional checks, testing and wind tunnel maintenance.

I plan to qualify through Vocational Training. All courses must be completed before applying.

- Basic Blueprint Reading or Machine Blueprint Reading
- Basic Precision Measuring Tools
- Milling Machine (a minimum of an 80-hour course is suggested)
- Lathe (a minimum of an 80-hour course is suggested)
See the last page for examples of approved milling machine and lathe courses.
- All applicants must complete an assessment or course within the last 5 years at their local Washington State community or technical college. The applicant must have minimum placement results or course completion as follows: Math Intermediate Algebra, English 90. An Assessment may be completed prior to the time of application, but no later than 14 days following a request for document verification.

A passing score of at least 80% is required for all Boeing classes or challenge tests and a grade of “C” or better for all educational transcripts. Boeing employees can challenge most courses at any ERT Self-Paced Lab. Documentation for all course completions, test challenges, and Assessment scores must be provided upon request and completed prior to applying. Any course of equivalent content is an acceptable substitute to the noted courses.

I plan to qualify through Work Experience. One year of trade related work experience and assessment placement or course results noted above. 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. A resume listing your work experience must be available upon request.

Work Experience Examples:

Mills (Conventional, NC, CNC, Profile)
Boring Mills (Vertical, Horizontal)
Jig Bore, Jig Grinder
Saws
Machine Layout

Work Experience Examples:

EDM Operator (Wire Feed, Non-Wire Feed)
Lathes (Conventional, NC, CNC, Turret)
Grinding (Internal, External, Surface, Thread)
Inspection, Machine/Detail Fabrication
Trade Related Bench Work
Heat Treat

Tooling Inspector

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

Target Job: 54808 Tooling Inspector B

Potential Locations: Everett, Renton, Seattle, and Auburn

Tooling Inspectors verify tools and tool components to applicable drawings, specifications, and model based definition. Inspectors will have a working knowledge of tool assembly techniques, welding specifications, production processes, and measurement technologies. Tooling Inspectors use various measurement metrologies and techniques to verify and document tooling processes and tools.

I plan to qualify through Vocational Training. All courses must be completed before applying.

- Basic Blueprint Reading or Machine Blueprint Reading
- Basic Precision Measuring Tools
- Introduction to Composites
- All applicants must complete an assessment or course within the last 5 years at their local Washington State community or technical college. The applicant must have minimum placement results or course completion as follows: Math Intermediate Algebra, English 90. An Assessment may be completed prior to the time of application, but no later than 14 days following a request for document verification.

A passing score of at least 80% is required for all Boeing classes or challenge tests and a grade of “C” or better for all educational transcripts. Boeing employees can challenge most courses at any ERT Self-Paced Lab. Documentation for all course completions, test challenges, and Assessment scores must be provided upon request and completed prior to applying. Any course of equivalent content is an acceptable substitute to the noted courses.

I plan to qualify through Vocational Training. An alternate method to meet the Tooling Inspector minimum vocational training requirements is to complete a certificate program that contains equivalent content to the acceptable Composite certificate programs noted below and assessment placement or course results noted above.

- The Aerospace Composite Technician Certificate program. Clover Park Technical College, South Hill Puyallup campus. See <http://www.cptc.edu/aerospace> for details.
- The Composite Technician Certificate program. Edmonds Community College. See <http://www.edcc.edu/programs/stem/etec/composites/default.html> for details.
- The Aerospace Composite Technician Certificate program. Everett Community College. See <http://www.everettcc.edu/composites> or <http://www.everettcc.edu/mfg> for details.
- The Aviation Composites Certificate program. South Seattle College, South campus. See <http://www.southseattle.edu/programs> for details
- The Aerospace Composite Technology program, North Idaho College. See <http://www.nic.edu/programs/viewprogram.aspx?landing=208> for details.
- The Composites Manufacturing Technology program, Olympic College. For details, see: <http://www.olympic.edu/Students/DegreesCertificates/Manufacturing+Technology/compositesmanufacturing-CC.htm>.

I plan to qualify through Work Experience. **One** year of trade related work experience and assessment placement or course results noted above. 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. A resume listing your work experience must be available upon request.

Work Experience Examples:

Jig Bore, Jig Grinder
Layout & Lofting (Sheet Metal, Non-metallic)
Inspection (Machine detail; Fabrication)
Tooling, Tool Maker; Tool Inspector
Manufacturing Engineering

Work Experience Examples:

Computer Numerical Control Programming
Composites
Tool & Die
Blue Streak/Bench Mechanic
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 apply for a tuition assistance voucher to reimburse course costs.

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

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

Everett Community College

2000 Tower Street, Everett, WA 98201, <http://www.everettcc.edu>, 425-388-9100
MFG T 104 Machine Operator 1

Green River College

12401 SE 320th Street, Auburn, WA 98092-3622, <http://www.greenriver.edu>, 253-833-9111
MFG 101: Intro to Machining and Manufacturing. Students must earn at least 8 of the 13 credits to obtain the required 80 hours of both lathe and milling machine apprenticeship prerequisites.

Lake Washington Institute of Technology

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.

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
Note: RTC often provides a Saturday-only class ideal for 2nd shift employees.

Shoreline Community College

16101 Greenwood Ave N, Shoreline, WA 98133-5696, <http://www.shoreline.edu>, 206-546-4101
MFGT113 (300 hours) Lathe, Milling Machine, and CNC



IAM/Boeing :: Joint Programs
Apprenticeship Program - Puget Sound



"Apprenticeship... The original four year degree."

Current (and eligible former) Boeing Employees

Options to Complete Apprenticeship Vocational Requirements



- ✚ Complete Boeing ERT Courses: Obtain ERT self-paced course materials from ERT Labs, and use My Learning to enroll in instructor-led ERT and to access Web-based courses. All ERT courses require a final test administered in an ERT Lab for course completion credit.
- ✚ Complete Challenge Tests: For current and eligible former Boeing employees already possessing knowledge and skills for required apprenticeship courses, complete ERT challenge tests in an ERT lab. For paper based and hands-on challenge tests, visit an ERT Lab (<http://hr.web.boeing.com/index.aspx?com=15&id=128>). (An appointment is typically not necessary for written and computer-administered tests however hands-on assessments often require appointments. Call an ERT Lab ahead of time to confirm availability and allow 2 to 3 hours for testing). Passing a challenge test is considered the equivalent of taking and passing the course.
- ✚ Complete Non-Boeing Courses and/or Certificates/Degrees: Generally, required apprenticeship courses and certificates/degrees offered through area colleges can satisfy apprenticeship application requirements. Consult the Apprenticeship PrepPack for certificate/degree and college examples and, before enrolling in courses, consider speaking with college instructors and advisors to help ensure you will learn needed knowledge and skills. Current and eligible former Boeing employees can apply for tuition assistance for eligible classes and certificates through the IAM/Boeing Joint Programs Education Assistance Program. Visit <http://iamboeing.web.boeing.com/index.aspx?com=1&id=41> for tuition assistance and eligibility information. Current Boeing employees can also apply for Boeing tuition assistance for eligible classes and certificates through the Learning Together Program (LTP) via Total Access (http://ltd.web.boeing.com/LTD_CEA/index.cfm) Funding approval is required prior to the course/certificate start date.

Non-Boeing Applicants

Options to Complete (and Learn More About) Apprenticeship Vocational Requirements

- ✚ For non-Boeing applicants, required apprenticeship courses and/or certificates/degrees may be taken (or challenged) at many area colleges (consult this PrepPack for certificate/degree and college examples). A grade of "C" or better is required unless the course is pass/fail. Documentation for all challenges and/or course and degree completions must be available upon request.

Who Can Apply, How, and When

All Boeing and non-Boeing candidates may apply for open positions posted through the Boeing Global Staffing on-line requisition system at <http://www.boeing.com/careers> during advertised application acceptance periods. Regularly monitor the Boeing Careers and IAM/Boeing Joint Apprenticeship websites for new apprenticeship opportunities. A tip sheet and other documents to assist candidates with the application process are available at <http://www.iam-boeing-apprenticeship.com>.

Contact Information

IAM/Boeing Joint Apprenticeship Office: PO Box 3707, MC 5M-202, Seattle WA 98124-2207

Internal web: <http://apprenticeship.web.boeing.com>; External web: <http://www.iam-boeing-apprenticeship.com>



IAM District 751 Office: 9125 15th Place South, Seattle, WA 98108

Web: <http://www.iam751.org>. M-F 8:00 am to 5:00 pm. Office: 206-763-1300 or 1-800-763-1301

Auburn Hall: 201 A Street SW, Auburn, WA 98001. 253-833-5590

Renton Hall: 233 Burnett Avenue N, Renton, WA 98057. 425-235-377

Seattle Hall: 9125 15th Place S, Seattle, WA 98108. 206-764-0324

Everett Hall: 8729 Airport Road, Everett, WA 98204. 425-355-8821