



APPRENTICESHIP PROGRAM OCCUPATION PROFILE:

POLYMECHANIC 2

A Polymechanic is a manufacturing technician trained in machining, CNC (computer numerical control) programming, assembly, automation, and quality control. Polymechanics manage complex machining work, integrate mechanical and electronic systems, and support process improvements while working safely and communicating effectively.

The Polymechanic 2 apprenticeship is a three-year program delivered in two phases. During the first two years, apprentices build the same broad technical and professional skills as the Polymechanic 1 occupation. In the third year, apprentices enter a specialization track selected with their employer based on regional need. Specializations may include advanced computer-aided design and manufacturing (CAD/CAM), mechatronics, robotics integration, or additive manufacturing.

By combining a strong manufacturing foundation with specialized training, the program prepares students for Advanced Manufacturing careers while meeting local employer demand.

This occupation is ideal for a student who:

- Likes doing hands-on work, figuring out how items function, and making things.
- Enjoys math, science, engineering, and technology.
- Has a strong work ethic, with attention to detail and the ability to maintain quality standards.
- Works well with teams, communicates effectively, and demonstrates resilience and a willingness to learn.

What is the average starting hourly wage for this apprenticeship?

The salary varies by employer and by region, but the typical range for the first two years is **\$14-17/hour**. The pay range for the final year will vary based on the specialization track chosen by the student. Apprentices are employees of their company and fall under their employment policies for benefits, performance reviews, and salary increases.

TYPICAL SCHEDULE

What year in school do students begin this apprenticeship?

11th grade

How long does this apprenticeship last?

Three years (year-round), including one year after high school

How many days each week do students participate in the apprenticeship?

11th grade: Two days/week

Summer after 11th grade:
Five days/week

12th grade: Three days/week

Summer after 12th grade:
Five days/week

Final year: Four days/week
with employer, one day/week
completing coursework

What hours do students work during their apprenticeship?

Employers and apprentices work together to identify individual schedules. While hours vary, the goal is for apprentices to work eight-hour days.

What do apprentices do during their apprenticeship?

- Manufacture parts using hand tools and machines.
- Assemble and commission mechanical and mechatronic systems.
- Measure and inspect components to exact specifications.
- Use computer-aided design and manufacturing (CAD/CAM) software to model parts and create technical drawings.
- Build and test automated equipment; prepare pneumatic, hydraulic, electrical, and electronic components; wire control panels; program PLCs and robots; and debug systems.
- Weld and fabricate structural assemblies and fixtures.
- Complete tasks specific to their chosen specialization track.

What are some of the skills students learn on the job?

- Use of CAD tools to design parts and basic CAM software to plan machining.
- Knowledge of safety practices, precision measurement, and technical drawing interpretation.
- Hands on experience with manual and CNC machining using real equipment.
- Skills in equipment maintenance and documenting work in digital systems.
- Exposure to basic troubleshooting and problem identification under supervision.
- Teamwork skills for solving problems and driving continuous improvement.
- Professional communication skills for working with supervisors and coworkers.
- Skills specific to their chosen specialization track.

What classes do students take at their high school to complete this apprenticeship?

The student's school schedule must allow them to leave the school building to work while still completing the classes they need to graduate high school. Also, students will be required to take several courses as part of their apprenticeship, including technical math and communication, among others. Some of the required classes will be available at their high school as dual-credit courses, and others will be offered at a regional Career and Technical Education Center.

What credential does a student receive when they complete this apprenticeship?

Through this apprenticeship, students will meet the key requirements for Indiana's new Employment Honors Plus diploma seal: completing at least 650 hours of work-based learning and earning an INCAP credential, which is recognized by the Indiana Department of Education as a Credential of Value. The diploma seal and the INCAP credential will be recognized by businesses as indicators of industry experience, and the INCAP credential may count toward college credit in a related degree program. Students will also earn multiple industry-recognized certifications throughout their apprenticeship.

If a student chooses to continue working after their apprenticeship, what jobs are they qualified for?

Because the Polymechanic 2 apprenticeship is broad in scope and includes a specialization track, program graduates are prepared to be hired immediately into a variety of roles that are a step above entry-level. Some of those roles include:

- CNC (computer numerical control) Machinist
- Maintenance Technician
- Assembler
- Tool and Die Technician
- Quality Inspector/Quality Technician
- Automation Technician/Controls Technician
- Additional roles depending on the specialization track (e.g., Robotics Technician, Additive Manufacturing Technician)

