

Manufacturing Youth Apprenticeship

Course Outcome Summary

Course Information

Organization	Center for Career Development & Employability Training (CCDET)- University of Wisconsin- Oshkosh
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Description

This curriculum describes the performance-based worksite Competencies, Performance Standards, and Learning Objectives for the Wisconsin Youth Apprenticeship (YA) Program in Manufacturing. The Wisconsin Manufacturing YA Program is designed to provide students with a working understanding of core manufacturing industry skills and occupationally specific skills that serve as the standard for occupations in the manufacturing industry. This program provides the framework for educators and industry to work together to produce work-ready, entry-level employees that will compete favorably in a global market, as well as, provide for post-secondary educational advancement while integrating work-based learning in the school and worksite.

The Manufacturing YA program competencies are aligned with the national Manufacturing Skill Standards Council (<http://www.msscusa.org/>) and the National States' Career Cluster Skill Standards maintained by the National Council for Advanced Manufacturing (NACFAM), <http://www.nacfam.org>, the cluster leader for the States' Career Clusters project (<http://www.careerclusters.org/>). Manufacturing YA students are required to perform all of the Core and Safety skills, as well as, the Manufacturing Fundamentals skills for EACH pathway they enroll in. **Level One (one year)** YA students are to choose additional competencies from a MINIMUM of ONE Manufacturing Pathway from the following list:

Production Pathways- Assembly & Packaging, Casting, Conditioning, Filling, Finishing, Forming, Joining/Combining, Machining- Grinder, Machining- Lathe, Machining- Machine Center, Molding, Separating

OR

Production Operations Management Pathway- Production Control and Quality Management

Level Two (two year) YA students are to complete competencies from a MINIMUM of TWO Manufacturing Pathways from the aforementioned list.

EACH competency (work site skill) is listed with its corresponding Performance Standards and Learning Objectives. The Performance Standards describe the behaviors, **as applicable**, that employers should look for in order to evaluate the competency. The Learning Objectives suggest classroom learning activities for the required related technical instruction.

A Note about Child Labor Laws:

Youth apprentices who are 16-17 years old may operate the following light power driven machinery without meeting the student learner criteria:

Drill presses, grinder wheels, lathes and portable power-driven machinery such as drills, sanders and floor maintenance equipment such as polishers and scrubbers.

Metal lathes can be operated by a 16-17 year old while wood lathes are prohibited under 18. Wisconsin's rule is based upon the federal child labor rule which also makes this distinction.

Youth apprentices who are 16-17 years old must meet student learner criteria in order to operate the following machinery:

Metal forming, punching and shearing power-driven machines (270.12(19))

Students may operate or assist on pressing or punching machines such as punch presses machines provided they are equipped with automatic feed and ejection, as well as, a fixed barrier guard to prevent the hands or fingers of the operator from entering the area between the dies; power presses; and plate punches. All other types are considered hazardous.

Saws and guillotine shears (270.12(25))

Students may operate or assist on these types of machines without meeting student learner criteria provided they are equipped with automatic feed and ejection. All other types are considered hazardous.

The ***student learner exception limits*** the minor to using the **hazardous** equipment on an incidental basis [less than 5% of their work time] and only occasionally [can't be a regular part of their job]. For example, in carpentry, most of the work is acceptable but once in a while you might need the minor to use a saw (hazardous for under 18) to cut a piece to fit.

CLARIFICATION:

Automatic feed and discharge machines are NOT prohibited. While saws and shears are normally prohibited, state and federal regulations permit 16 and 17 year old minors to operate and assist in operating automatic feed and discharge machines regardless of whether the minor is a student learner. The key with these machines is it may be safe to operate the machine but the minor cannot set up, repair or clean the machine IF that involves coming in contact with the saw blade or the shears. The automatic feed and discharge features eliminate that concern for the operator.

Note there is NOT a similar ruling for drop presses. The reason for that is there are two dangers with a drop press. Like the saw, the minor cannot come in contact with the part of the machinery that can harm them. Unfortunately with the drop press there is the additional danger that if the die in the press is not properly cleaned out after each strike, the next strike might result in the waste material shattering and shrapnel being flung from the machine.

See Appendix A for more detail on Child Labor Laws

Curriculum Sources

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