Manufacturing Career Cluster

What is the Manufacturing Career Cluster?
The manufacturing career cluster prepares learners for careers in planning, managing, and performing the processing of materials into intermediate or final products. It also prepares students to provide professional and technical support in carrying out these activities. Manufacturing is a diverse cluster which prepares learners in six areas, or pathways, of manufacturing: Production; Manufacturing Production Process Development; Maintenance, Installation and Repair; Quality Assurance; Logistics and Inventory Control; and Health Safety and Environmental Assurance.

What skills are taught in the Manufacturing Career Cluster? What are the program objectives?
Students learn basic skills in machine operation, quality control, environmental and safety engineering, inventory and material management and control, computer integrated manufacturing, and teamwork. The skills that are taught are based on national skill standards, which describe the work to be performed, how well the work must be performed and the level of knowledge and skill required to perform that work. At the high school level, courses cover all of the 6 pathways listed above.

What will the program prepare the students to do?
Students who complete the program will have the necessary set of skills to work at a beginning level in most manufacturing sectors. In addition, students will have the information and skills necessary to pursue post-secondary education. Some manufacturing programs are closely tied to engineering and pre-engineering programs such as Project Lead the Way (see the Engineering Career Pathway).

Is the program connected to the manufacturing community?
Yes. The manufacturing skill standards being taught have been developed by industry, which includes business, labor unions, employee and employer organizations, in cooperation with educators and public interest groups, at the national level. In NH, the program’s advisory board includes representatives from PH Precision Manufacturing, NH Ball Bearing, Timberland Shoes, and Lonza Biologics. In addition, a number of national organizations play an ongoing role, including the National Association of Manufacturers, Manufacturing Skill Standards Council, Manufacturing Industries Alliance, National Skill Standards Board, Precision Metalforming Association, National Institute of Metalworking Skills, National Council for Advancing Manufacturing, Architectural Woodworking Institute and Woodlinks.

Is there a relationship with post-secondary institutions?
Yes. Articulation agreements exist between Regional Career and Technical Centers and campuses of the NH Community Technical College System. These agreements provide opportunities for advanced placement and/or college credit. Some schools also participate in Project Running Start, which allows current high school students to enroll in a NH Community Technical College course while completing their high school program, at
reduced tuition rates. In addition, students may choose to complete general college requirements through technical college evening and/or summer courses prior to HS graduation.

High schools also participate in local advisory committees and/or associations with post-secondary and industry participants. Most of these groups have affiliations with state and national professional organizations.

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