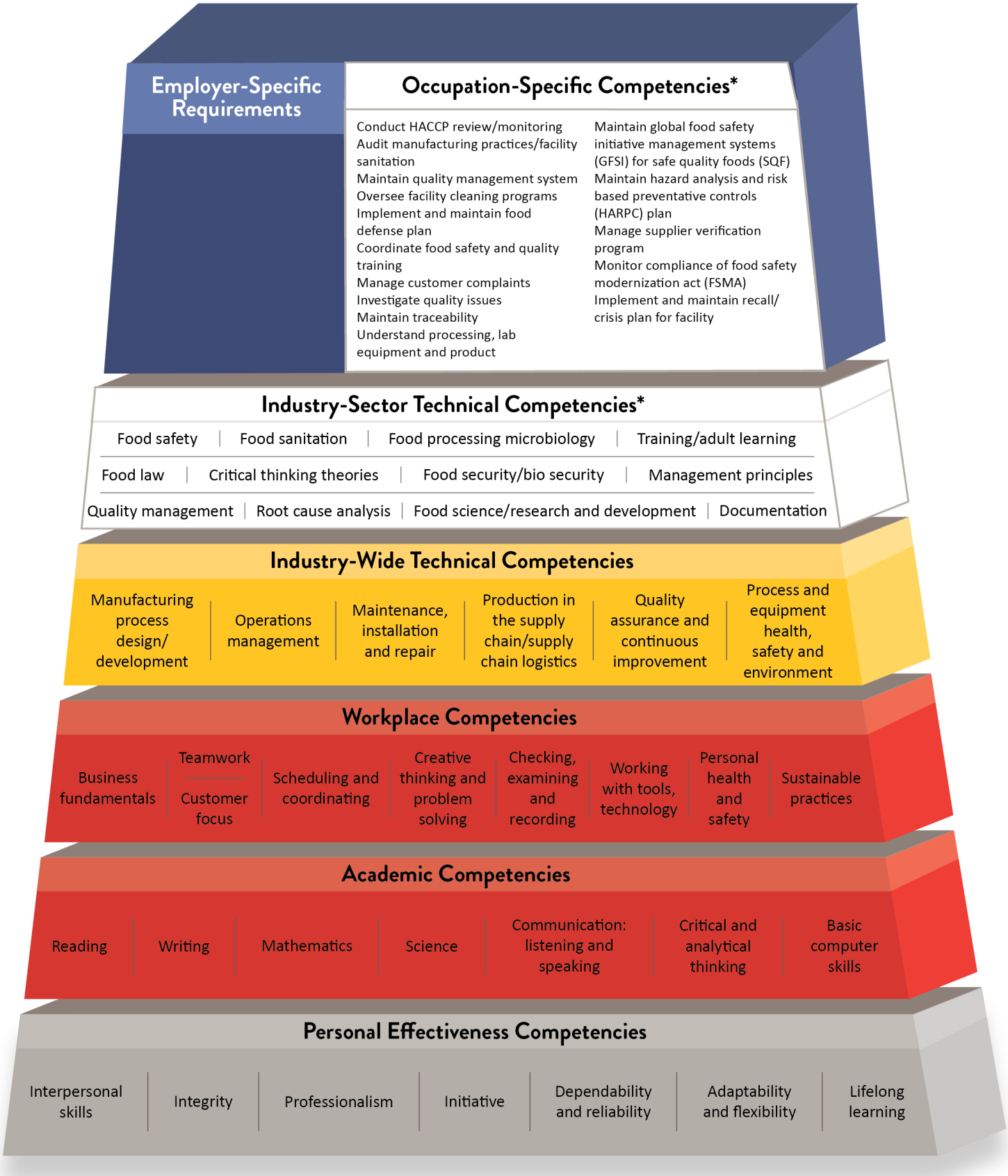
Minnesota Dual-Training Pipeline

Competency Model for Advanced Manufacturing

Occupation: Quality Assurance/Food Safety Supervisor



Based on: Advanced Manufacturing Competency Model, Employment and Training Administration, United States Department of Labor, February 2025. For more detailed information about competency model creation and sources, visit dli.mn.gov/business/workforce/advanced-manufacturing.

Competency Model for Quality Assurance/Food Safety Supervisor (Advanced Manufacturing)

Quality Assurance/Food Safety Supervisor – This position in advanced manufacturing is responsible for overseeing the quality standards of all food processed at a processing facility (typically a larger site for advanced manufacturing). The role is responsible for ensuring that all food processed is handled in a manner that makes the food product safe for consumption, meets all standards of HACCP and does not endanger the consumer eating the product or the staff handling it through processing. The Quality Assurance/ Food Safety Supervisor is also responsible for training staff on how to ensure food safety and quality as well as routinely inspecting and documenting the finds of inspection of the food product.

*Pipeline recommends the Industry-Sector Technical Competencies as formal training opportunities (provided through related instruction) and the Occupation-Specific Competencies as on-the-job (OJT) training opportunities.

Industry-Sector Technical Competencies

Related Instruction for dual training means the organized and systematic form of education resulting in the enhancement of skills and competencies related to the dual trainee's current or intended occupation.

- **Food safety** - Understand theory and implementation practices of HACCP.
- **Food sanitation** – Knowledge of sanitation procedures from contamination in all functions and operations of a facility.
- **Food processing microbiology**– Understand the theory of microbiology related to the food processing environment.
- **Training/adult Learning** - Understand how to effectively train and present material to adult learners.
- **Documentation** – Understand theory and principals of documentation and document control procedures.
- **Critical thinking theories** – Understand theory and principals of key critical thinking theories, such as Root Cause Analysis, and Gap Analysis.

- **Food security/bio security** - Awareness of processes for prevention and preparedness to maximize food security against tampering, whether natural, inadvertent, or intentional.
- **Food science/ research and development** – Understanding of food science principles and provide technical support for research and development.
- **Quality management** – Understand and implement GMPPS's per BRC CFR 21 and Foreign Material Control.
- **Root cause analysis** – Knowledge of the method of problem solving used for identifying the root causes of faults or problems.
- **Management principles** – Understand management theories related to management, leadership, and team building.
- **Food law** – Knowledge of laws surrounding food production and how to oversee the production facility to ensure compliance of state, federal and local laws.

Occupation-Specific Competencies

On-the-Job Training is hands-on instruction completed at work to learn the core competencies necessary to succeed in an occupation. Common types of OJT include job shadowing, mentorship, cohort-based training, assignment-based project evaluation and discussion-based training.

- **Perform HACCP review and monitoring** – Demonstrate understanding of Hazard Analysis Critical Control Point (HACCP) management system and ability to review associated company production practices to ensure conformance.
- **Audit manufacturing practice and facility sanitation** – Know how to conduct audits on manufacturing practices and facility sanitation procedures.
- **Maintain quality management system** – Understand how to oversee data and policies related to quality management.

  ***** If site does dairy operations, dairy processing and those involved in pasteurized milk ordinance (PMO), must demonstrate a knowledge of how to ensure 3A Standards P.M.O. (USDA Compliance) are met in the facility.
- **Maintain facility cleaning programs** – Know how to oversee all aspects of the production facility's cleaning programs.
- **Maintain food defense plan** – Be able to review and revise Food Defense Plan based on a plant's changing conditions or process changes.

- **Coordinate food safety and quality training** – Know how to be responsible for coordinating and conducting safety and quality training for facility employees.
- **Manage customer complaints** – As needed, be able to field customer complaints and address quality issues.
- **Investigate quality issues** – Know how to conduct investigations into product quality issues and manage resolution actions.
- **Verify Traceability** – Be able to verify the history, location, and application of components of the manufacturing process, as well as products.
- **Understand processing, lab equipment and product** – Demonstrate understanding of facility processing and lab equipment, as well as final products.
- **Maintain GFSI global food safety initiative management systems (SQF) Safe quality foods** – Understand how to keep facility within GFSI Global Food Safety Initiative standards and be able to operate the facility at a level that fits within the standards of a safe quality food program certification.
- **Maintain hazard analysis and risk based preventative controls (HARPC) plan** – Know how to keep the facility operating at a level that ensures accordance with the hazard analysis and risk based preventative controls (HARPC) plan.
- **Manage supplier verification program** – Understand how to ensure all food suppliers are up to standards and be able to verify where their food product came from before it arrived at the facility.
- **Monitor compliance of food safety modernization act (FSMA)** – Know the law of the food safety modernization act and demonstrate how to ensure that the facility is acting in accordance with the law.
- **Maintain recall and crisis plan for facility** – Know how to develop a plan in case of a food crisis or a recall and then how to implement a plan if such an event occurred.

Updated December 2025