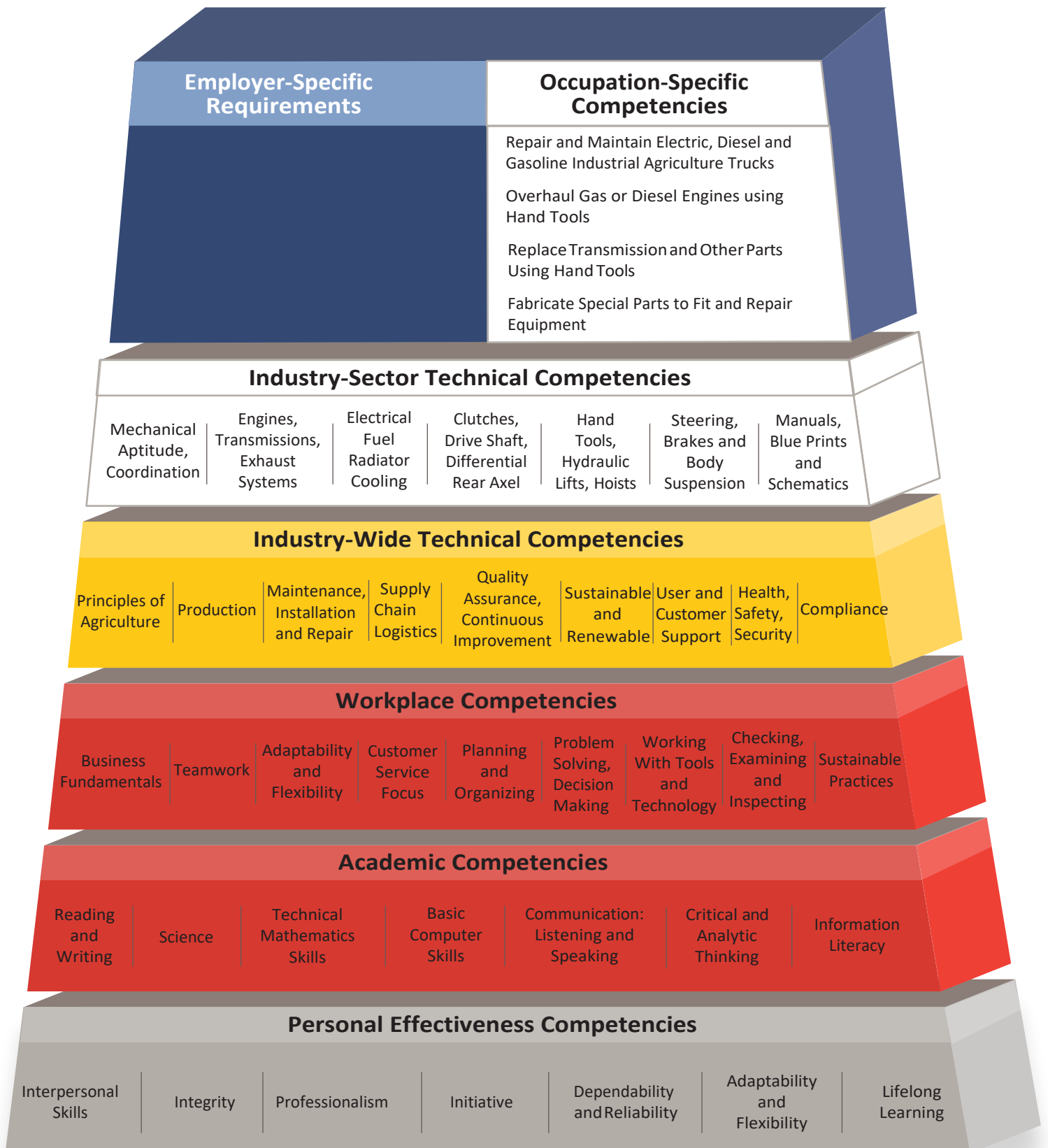


Minnesota Dual-Training Pipeline

Competency Model for Agricultural Occupation: Agriculture Equipment Mechanic



Based on: Truck Mechanics and Diesel Engine Specialists: Competency Model Employment and Training Administration, United States Department of Labor opportunities (provided through related instruction) and the Occupation-Specific Competencies as on-the-job training opportunities.



Agriculture Equipment Mechanic – Agriculture equipment mechanics inspect, repair, or overhaul large industrial agricultural trucks and machines with gasoline or diesel engines.

Industry-Sector Technical Competencies

- Mechanical Aptitude & Coordination – Ability to understand how machines work and possess the physical coordination and dexterity to use tools.
- Engines, Transmissions, Exhaust Systems – Training on how engines, transmissions and exhaust systems work on machinery and how to maintain and repair them.
- Electrical Fuel Radiator Cooling – Understand how engine cooling systems work and how to maintain, repair and replace them.
- Clutches, Drive Shaft, Differential Rear Axle – Training on how to maintain, repair and replace clutches, drive shafts, and differential rear axles.
- Hand Tools, Hydraulic Lifts, Hoists – Knowledge on how to safely use hand tools, lifts and hoists while working on machinery.
- Steering, Brakes and Body Suspension – Training on how to maintain, repair and replace steering, brakes and body suspension systems.
- Manuals, Blueprints and Schematics – Understand how to read technical information found in manuals, blueprints and schematics relating to the machinery.

Occupation-Specific Competencies

- Repair and Maintain Electric, Diesel and Gasoline Industrial Agriculture Trucks – Demonstrate understanding of how to maintain and repair industrial agriculture truck engines and machinery with a variety of engine modes and components.
- Overhaul Gas or Diesel Engines Using Hand Tools – Demonstrate process of overhauling an industrial agriculture engine.
- Replace Transmission and Other Parts Using Hand Tools – Ability to properly install replacement parts for agriculture equipment's transmission and on other parts of agriculture machinery.
- Fabricate Special Parts to Fit and Repair Equipment – Demonstrate understanding of how to do fabricating of special parts for large agriculture equipment when required.

Agriculture Equipment Mechanic Occupational Competency Training Plan

Related Instruction means an organized and systematic form of instruction designed to provide the apprentice with the knowledge of the theoretical and technical subjects related to the apprentice's trade of occupation, or industrial courses or, when of equivalent value, by correspondence, electronic media, or other forms or self-study approved by the commissioner.

	Course	Course Description	Credit/Non-Credit	Hours Spent on Competency
	Mechanical Aptitude, Coordination			
	Engines, Transmissions, Exhaust Systems			
	Electrical Fuel Radiator Cooling			
	Clutches, Drive Shaft, Differential Rear Axel			
	Hand Tools, Hydraulic Lifts, Hoists			
	Steering, Brakes and Body Suspension			
	Manuals, Blueprints and Schematics			

On-The-Job Training is the work experience and instruction. Training experience need not be in the exact order as listed below.

	Trainer/Instructor	Name of person responsible for verifying competency mastery	Hours spent on competency
	Repair and Maintain Electric, Diesel and Gasoline Industrial Agriculture Trucks		
	Overhaul Gas or Diesel Engines using Hand Tools		
	Replace Transmission and Other Parts Using Hand Tools		
	Fabricate Special parts to Fit and Repair Equipment		

