

Agricultural Mechanics, Advanced

Exam Information	Description
Exam number 115 Items 24 National Career Cluster Agriculture, Food, and Natural Resources Certification available Yes	The Advanced Agricultural Mechanics industry certification exam assesses learners' knowledge of careers that repair, maintain, or restore agricultural machinery and equipment.

Exam Blueprint and Performance Skills

Standard	Percentage of exam score
1. Personal & Leadership Development	23%
2. Supervised Agricultural Experience	10%
3. Safety	16%
4. Design Fabrication Projects	35%
5. Create Fabrication Projects	16%

*Includes performance skill evaluation

Standard 1 - Personal & Leadership Development

Personal and Leadership Development; candidates will understand the importance of workplace skills and will implement and practice these skills in the classroom, laboratory, and work-based experiences.

Objective 1 Use Communication skills to interact with others effectively

1. Understand when it is appropriate to listen and to speak.
2. Understand and follow verbal and written instructions for classroom and laboratory activities.
3. Reflect on assigned work and then communicate progress relative to completion.

Objective 2 Effectively use teamwork to respectfully work with others.

1. Work with a team to complete assignments and projects.
2. Understand when it is appropriate to listen and to speak.
3. Understand and follow verbal and written instructions for classroom and laboratory activities.
4. Reflect on assigned work and then communicate progress relative to completion.

Objective 3 Use critical thinking and problem-solving skills; reason, analyze, reflect, evaluate, and interpret information to make judgments and decisions to solve problems.

1. Use generally accepted industry standards to analyze, evaluate, troubleshoot, and diagnose the challenges associated with a specific repair, maintenance, or restoration project.

Objective 4 Be dependable, reliable, steady, trustworthy and consistent in performance and behavior.

1. Set and meet goals on attendance and punctuality.
2. Prioritize, plan and manage work to complete assignments and projects on time.

Objective 5 Be accountable for results.

1. Assure work quality by using industry standards for process, procedure, and evaluation.
2. File a weekly/bi-weekly written report on progress toward completion of assignments and projects.

Objective 6 Be familiar with the legal requirements and expectations of the course.

1. Be familiar with the course disclosure statement and all requirements for successful completion of the course.
2. Demonstrate workplace ethics.

Objective 7 Demonstrate employment skills.

1. Build a job search network and find job leads.
2. Write a resume and create a job portfolio.
3. Write a letter of application.
4. Complete a job application.
5. Participate in an actual or simulated job interview.

Optional: Standard performance evaluations on the final page of this document

Standard 2 - Supervised Agricultural Experience

Candidates will participate in a Supervised Agricultural Experience (SAE).

Objective 1 Candidates will participate in an entrepreneurial, paid employment, research or exploratory focused work-based experience outside the classroom.

Objective 2 Candidates are required to keep a personal record/journal/log of their work-based experience.

Optional: Standard performance evaluations on the final page of this document

Standard 3 - Safety

Candidates will work to create a culture of safety.

Objective 1 Complete a candidate safety pledge (disclosure statement).

Objective 2 Respond to first aid requirements as allowed by school policy.

1. Locate first-aid kits and investigate their contents and discuss the use of the items as allowed by school policy.
2. Discuss appropriate safety responses in an accident or emergency.
3. Demonstrate the use of simple first aid in an accident with an injury.

Objective 3 Follow safety practices.

1. Use appropriate PPE (Personal Protective Equipment) at all times.
2. Eliminate workplace practices that distract attention and create an unsafe environment; e.g. cell phones and other electronic devices.

Objective 4 Perform housekeeping duties.

1. Keep personal workspace clean and work with others to clean and organize community space.

Objective 5 Successfully complete safety tests or demonstrations on equipment use and equipment safety.

1. Candidates will demonstrate an understanding of safe practices with 100% accuracy.

Optional: Standard performance evaluations on the final page of this document

Standard 4 - Design Fabrication Projects

Candidates will design a fabrication project.

Objective 1 Select a project with blueprints for fabrication.

1. Analyze the cost-effectiveness of the project.

Objective 2 Interpret welding and construction symbols/information.**Objective 3** Develop a project portfolio.

1. Drawing
2. Bill of materials
3. Cut list
4. Cost estimates

Objective 4 Prepare a materials order and secure the materials.**Objective 5** Develop a production schedule.

1. #1 Blueprint
2. #2 Bill of materials/cut list
3. #3 Cost estimate
4. #4 Order material
5. #5 Fabricate

Optional: Standard performance evaluations on the final page of this document

Standard 5 - Create Fabrication Projects

Candidates will fabricate projects.

Objective 1 Demonstrate proper equipment setup and usage.

Objective 2 Accurately measure and prepare materials for fabrication.

Optional: Standard performance evaluations on the final page of this document

Performance Skills Evaluation

Exam name: **Agricultural Mechanics, Advanced**

Candidate Name: _____

Performance assessments may be completed and evaluated any time before the certification is issued. The following performance skills can be used in connection with the associated standards and exam. The evaluator will function as the subject matter expert to determine if the candidate meets the skills requirements with a Yes/No for passing.

Standard 1 – Personal and Leadership Development • Set and meet goals on attendance and punctuality. • File a weekly/bi-weekly written report on progress toward completion of assignments and projects. • Write a resume and create a job portfolio.	Pass:
Standard 2 – Supervised Agricultural Experience (SAE) • Keep a personal record/journal/log of their work-based experience.	Pass:
Standard 3 – Safety • Use appropriate PPE (Personal Protective Equipment) at all times. • Keep personal workspace clean and work with others to clean and organize community space. • Demonstrate an understanding of safe practices with 100% accuracy.	Pass:
Standard 4 – Design A Fabrication Project • Develop a project portfolio • Develop a production schedule.	Pass:
Standard 5 – Fabricate A Project • Construct a project.	Pass:

Evaluator Name:

Date:
