

## Agricultural Mechanics III Pacing Guide

*\*Note: this course is a senior level project class where students complete various projects during the course of the year as requested. Standards are not set in any order/time, but will be completed throughout the entirety of the course.*

<p><b><u>Unit 1:</u></b></p> <p>Shop Safety</p>	<p><b><u>AFNR-AMTII-3</u></b></p> <p>Recognize and describe hazards in woodworking, identify how to create a safe work environment, and demonstrate proper woodworking safety practices.</p> <p><b>3.1</b> Describe a safe work environment</p> <p><b>3.2</b> Identify and eliminate potential hazards in woodworking.</p> <p><b>3.3</b> Distinguish the areas identified by various safety colors and the importance of the coding.</p> <p><b>3.4</b> Describe the meaning of each safety color.</p> <p><b>3.5</b> Exhibit proper dress and protective devices for laboratory activities.</p> <p><b>3.6</b> Safely operate all hand tools, power tools, and equipment in the woodworking laboratory.</p>	<p>1 Week</p>
<p><b><u>Unit 2:</u></b></p> <p>Woodworking</p>	<p><b><u>AFNR-AMTII-4</u></b></p> <p>Identify and investigate careers in the agriculture mechanics industry in the area of woodworking.</p> <p><b>4.1</b> Identify and describe occupations in agriculture woodworking.</p> <p><b>4.2</b> List and describe employment skills in agriculture woodworking.</p> <p><b>4.3</b> Explain requirements necessary to secure a job in the agriculture woodworking industry.</p> <p><b>4.4</b> Research the job entry employment opportunities available in agriculture woodworking and compile a list of those opportunities available locally.</p> <p><b>4.5</b> Identify the professional careers available in agriculture woodworking and create a low-chart that visually illustrates the educational preparation necessary to obtain those jobs.</p>	<p>17 Weeks</p>

	<p><b><u>AFNR-AMTII-5</u></b></p> <p>Distinguish and explain the correct use of common woodworking hand tools and layout tools used in woodworking.</p> <p><b>5.1</b> Demonstrate the use of woodworking hand tools.</p> <p><b>5.2</b> Demonstrate the proper care and storage of hand tools.</p> <p><b>5.3</b> Demonstrate the techniques for restoring worn, damaged, or abused tools to good working condition.</p> <p><b><u>AFNR-AMTII-6</u></b></p> <p>Select and use common portable and stationary power woodworking machines safely.</p> <p><b>6.1</b> Perform basic procedures for using stationary power woodworking machines.</p> <p><b>6.2</b> Describe major parts of specified tools and machines.</p> <p><b>6.3</b> Analyze the main uses and safety precautions for each woodworking machine.</p> <p><b>6.4</b> Demonstrate the proper operation of basic power woodworking equipment.</p>	
<p><b><u>Unit 3:</u></b></p> <p>Metal Fabrication</p>	<p><b><u>AFNR-AMF-4</u></b></p> <p>Demonstrate Metal Fabrication Safety by recognizing, identifying, and describing factors that affect the lab and work environment and be able to determine the proper procedures for correcting safety hazards.</p> <p><b>4.1</b> Identify and eliminate potential hazards in the agricultural mechanics laboratory and/or work setting.</p> <p><b>4.2</b> Discuss the importance of safety in agricultural occupations.</p> <p><b>4.3</b> Describe a safe agricultural work environment.</p>	<p>17 Weeks</p>

	<p><b>4.4</b> Select safety equipment and procedures for various agriculture related activities.</p> <p><b>4.5</b> Demonstrate safety procedures and appropriate behavior while working in the agriculture classroom, labs, and/or work sites.</p> <p><b>4.6</b> Distinguish the areas identified by various safety colors and the importance of the coding.</p> <p><b>4.7</b> Describe the meaning of each safety color.</p> <p><b>4.8</b> Identify and describe personal protective equipment required for various activities conducted in the agricultural mechanics laboratory and industry.</p> <p><b>4.9</b> Recognize potential hazards related to working with electricity, electric arc welders, hand tools, portable and stationary power equipment, power machinery, fasteners and fuels, lubricants, solvents, paints and other chemicals used in agricultural mechanics.</p> <p><b>4.10</b> Safely operate all hand tools, power tools, and equipment in the agricultural mechanics laboratory.</p>	
<p><b>Unit 4:</b>           Analyzing Blue Prints</p>	<p><b>AFNR-AMTII-8</b></p> <p>Design, draw, construct, finish, and explain the entire process for a woodworking project.</p> <p><b>8.1</b> Create woodworking project plans using common drawing equipment and basic drawing symbols.</p> <p><b>8.2</b> State the use and format of a bill of materials.</p> <p><b>8.3</b> Calculate the bill of materials including board feet of lumber and material costs.</p> <p><b>8.4</b> Select and plan projects that develop woodworking skills with hand tools.</p> <p><b>8.5</b> Select and safely use woodworking tools during project construction.</p> <p><b>8.6</b> Demonstrate proper techniques for safely using hand tools.</p>	<p>17 Weeks</p>

	<p><b>8.7</b> Prepare wood projects for finishing by selecting and using appropriate materials.</p> <p><b>8.8</b> Select and use filler, paint, varnish, and stains on woodworking projects.</p>	
<p><b>Unit 5:</b>           Record Keeping          And          Employment          Experience</p>	<p><b><u>AFNR-AMTI-1</u></b></p> <p>The following standard is included in all CTAE courses adopted for the Career Cluster/Pathways. Teachers should incorporate the elements of this standard into lesson plans during the course. The topics listed for each element of the standard may be addressed in differentiated instruction matching the content of each course. These elements may also be addressed with specific lessons from a variety of resources. This content is not to be treated as a unit or separate body of knowledge but rather integrated into class activities as applications of the concept.</p> <p><b>1.1</b> Communicate effectively through writing, speaking, listening, reading, and interpersonal abilities.</p> <p><b>1.2</b> Demonstrate creativity by asking challenging questions and applying innovative procedures and methods</p> <p><b>1.3</b> Exhibit critical thinking and problem solving skills to locate, analyze and apply information in career planning and employment situations</p> <p><b>1.4</b> Model work readiness traits required for success in the workplace including integrity, honesty, accountability, punctuality, time management, and respect for diversity.</p> <p><b>1.5</b> Apply the appropriate skill sets to be productive in a changing, technological, diverse workplace to be able to work independently and apply team work skills.</p> <p><b>1.6</b> Present a professional image through appearance, behavior and language</p>	<p>17 Weeks</p>