

**Technology Education**

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Students today need to be prepared for the future. They will need to have basic skills in areas such as: computers, design, building and testing different products, brainstorming, communication, computer controlled systems, robotics, lasers, and many other technologies in order to be prepared for the future. Most of these can be accomplished in the classes offered in the Technology Education area.

All of the classes offered in the Technology Education area are **hands on activities**.

If these classes sound like they are something you would like to do to prepare for your future, sign up today.

**Production Tech./Wood 1 –Skyview & West**  
**Woodshop 1 - Senior** **Credit 1/2** **9, 10, 11, 12**

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<b>Course Name</b>	<b>Semester 1 &amp; 2</b>	<b>Grade Level</b>
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**Course Description:** Students will learn the fundamentals of woodworking and cabinetry. Activities are designed to provide opportunities for students to demonstrate the safe use of woodworking methods used in manufacturing of cabinets and furniture. The student will learn to read diagrams and plans to carry out stages of manufacture and types of wood joints used by professionals. This course is a prerequisite for future woodworking classes (Production Technology 2, Production Technology 3). Each woodworking class prepares the student for the next level in woodworking. Class size is limited to 24.

**A replenishment fee may be required for materials and consumable used throughout the course.**

**Prerequisite Courses:** None

**Applies Toward Graduation Requirements of:** 1 Practical Arts credit

**Production Tech./ Wood 2 – Skyview & West**  
**Woodshop 2 - Senior** **Credit 1/2** **10, 11, 12**

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<b>Course Name</b>	<b>Semester 1 &amp; 2</b>	<b>Grade Level</b>
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**Course Description:** Production Technology 2 employs all the skills and concepts addressed in Production Technology 1. Students will engage in activities designed to enhance learned skills and introduce new ones. A more complex project challenging students to demonstrate higher-level skills is required. Focus on initial planning stages will highlight skills in reading diagrams, cost estimating, and process planning, Students will be introduced to the use of special set ups including custom jigs and fixtures as a means to ensure product quality and gain awareness of their importance within the manufacturing industry. Students will also be encouraged to use their skills to design and build an independent project.

**A replenishment fee may be required for materials and consumable used throughout the course.**

**Prerequisite Courses:** Production Technology 1

**Applies Toward Graduation Requirements of:** 1 Practical Arts credit

**Woodshop 3 - Senior & Skyview**                      **Credit 1/2**                      **10, 11, 12**

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**Course Name**    **Semester 1 & 2**    **Grade Level**

**Course Description:** This semester course is designed for both male and female students and is a continuation of the Woodshop 2 course. It involves problems in advanced joinery techniques used in door and drawer construction, as well as face and frame construction of cabinets. Various common cabinet woods will be studied and incorporated into a project of choice with the student making complete drawings and a plan of procedure.

**A replenishment fee may be required for materials and consumable used throughout the course.**

**Prerequisite Courses:** Woodshop 2

**Applies Toward Graduation Requirements of:** 1 Practical Arts credit

**Production Tech. /Wood 3 - West Only**                      **Credit 1/2**                      **10, 11, 12**

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**Course Name**    **Semester 1 & 2**    **Grade Level**

**Course Description:** Production Technology 3 is a course where the student determines the project(s) he or she will produce. The scope of the project will meet with the instructor's approval and utilize learned design and woodworking techniques. Students will demonstrate core skills that include managing a production timeline, product engineering, equipment and tool safety, and materials processing techniques. Instruction will support activities that include product design and development, process planning, and production management to enable the student to set-up, execute and manage each project. Students will also be exposed to related higher education, employment and career opportunities.

**A replenishment fee may be required for materials and consumable used throughout the course.**

**Prerequisite Courses:** Production Technology 2

**Applies Toward Graduation Requirements of:** 1 credit in Practical Arts

**Woodshop 4 - Skyview & Senior**                      **Credit 1/2**                      **11, 12**

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**Course Name**    **Semester 1 & 2**    **Grade Level**

**Course Description:** This course is designed for both male and female students who have completed Woodshop 3. This course involves students in fundamentals of furniture styles and good design. The student will design a project utilizing a recognized furniture style and bring it to completion while staying within time lines incorporated into the plan of procedure.

**A replenishment fee may be required for materials and consumable used throughout the course.**

**Prerequisite Courses:** Woodshop 3

**Applies Toward Graduation Requirements of:** 1 Practical Arts credit

<b>Drafting 1</b>	<b>Credit 1/2</b>	<b>10, 11, 12</b>
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<b>Course Name</b>	<b>Semester 1 &amp; 2</b>	<b>Grade Level</b>
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**Course Description:** The students will learn the basics of both mechanical and architectural drafting using AutoCAD, a computer-aided drafting program. Topics in traditional drafting include sketching, lettering multi-view projection, dimensioning, and residential planning and design CAD topics include entity creation, editing, use of layers, automatic dimensioning, and called plotting. Students will also be introduced to 3D design.

This class will be of interest to students planning careers in engineering, architecture, interior design, graphic arts, landscape design and building trades and many others.

**Prerequisite Courses:** None

Applies Toward Graduation Requirements of: 1 Practical Arts credit

<b>Drafting 2</b>	<b>Credit 1/2</b>	<b>10, 11, 12</b>
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<b>Course Name</b>	<b>Semester 1 &amp; 2</b>	<b>Grade Level</b>
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**Course Description:** The student will continue their drafting in both mechanical and architectural areas using traditional drafting and AutoCAD. Topics include multi-view projections, sectioning, auxiliary views, dimensioning, isometric projections, oblique designs, and architectural plans, surface intersections and development, architectural elevations and roof plans.

**Prerequisite Courses:** Successful completion of Drafting 1

**Applies Toward Graduation Requirements of:** 1 Practical Arts credit

<b>Drafting 3</b>	<b>Credit 1/2</b>	<b>11, 12</b>
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<b>Course Name</b>	<b>Semester 1 &amp; 2</b>	<b>Grade Level</b>
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**Course Description:** The student will study advanced drafting methods in both mechanical and architectural areas. Topics include architectural elevations, site planning and modeling. Students in Drafting 3 create a complete set of house plans including all internal systems and complete a scale model. 3D software is used for modeling as well.

**Prerequisite Courses:** Successful completion of Drafting 2

**Applies Toward Graduation Requirements of:** 1 Practical Arts credit

**Drafting 4**

**Credit 1/2**

**11, 12**

**Course Name**

**Semester 1 & 2**

**Grade Level**

**Course Description:** The student will study a broad array of architectural and engineering drafting areas. Topics include commercial design, home modeling, computer controlled machining and 3D design. The student will produce a set of portfolio quality drawings using both traditional and computer-aided means

**Prerequisite Courses:** Successful completion of Drafting 3.

**Applies Toward Graduation Requirements of:** 1 Practical Arts credit

**Technology Education 1 - Senior & West**

**Credit 1/2**

**9, 10, 11, 12**

**Course Name**

**Semester 1**

**Grade Level**

**Course Description:** Technology Education allows boys and girls to gain awareness of the role of technology and its impact on society, the environment, and the economy. This course emphasizes development of design and problem solving skills while teaching the importance of teamwork, communication, and other essential workplace skills. The course includes a series of presentations/lectures leading toward challenging hands-on activities utilizing light manufacturing tools within the classroom facility. Topics and design themes are linked to related social and technological issues. Lecture topics and design themes include: mechanism, hydraulic systems, inventions, robotics, career exploration, and more.

Achievement is measured in terms of outcomes demonstrating efficient design and construction of models and prototypes, and exhibiting effective time management and safe operations within the production lab.

**A replenishment fee may be required for materials and consumables used throughout the course.**

**Prerequisite Courses:** None

**Applies Toward Graduation Requirements of:** 1 Practical Arts credit

**Technology Education 2 - Senior & West Credit 1/2**

**9, 10, 11, 12**

**Course Name**

**Semester 1 or 2**

**Grade Level**

**Course Description:** The Technology Education 2 class allows students to further examine technology and its impacts on society, the environment, the economy, and the workplace through a series of lectures and hands-on activities. The course emphasizes extended personal development of design and problem solving skills. The complexities of the design-based problems encourage students to exhibit strong teamwork skills through peer collaboration and exploration. Models and prototypes are constructed using light manufacturing tools within the classroom facility.

As with technology, Education 1 the course is arranged around a series of presentations/lectures that introduce technological and social issues. Lecture topics and activities may vary depending on current events and student interests.

Achievement is measured in terms of outcomes demonstrating efficient design and construction of models and prototypes while exhibiting teamwork, effective time management, and safe operations within the production lab.

**A replenishment fee may be required for materials and consumable used throughout the course.**

**Prerequisite Courses:** None

**Applies Toward Graduation Requirements of:** 1 Practical Arts credit

**Technology Lab - West High**

**Credit 1/2**

**9, 10, 11, 12**

**Course Name**

**Semester 1 or 2**

**Grade Level**

**Course Description:** Technology Lab provides the student with exposure to a variety of technical areas.

Each activity ties to one or more classes offered at West High or the Career Center. This allows students to try out a topic before committing to a semester course.

A variety of software programs and simulations are utilized as well as computer hardware and programmable robots.

**Major Topics Include:**

Robotics, web page design, animation, design and problem solving, introductory programming, computer hardware, graphic design, drafting and pre-engineering.

No prior experience is necessary and each activity lasts approximately 2 weeks.

**Prerequisite Courses:** None

**Applies Toward Graduation Requirements of:** 1 Practical Arts credit

**Computer Language 1 - West Only                      Credit 1/2    9, 10, 11, 12**

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**Course Name    Semester 1    Grade Level**

**Course Description:** The students will learn to code and debug programs for the PC. The logic involved in writing programs is developed through the structured format of the Blitz 3D programming language. Students will learn to use programming to solve practical problems and to introduce potential career paths in the Information Technology (IT) industry. The course is designed to teach a “structured” approach to writing programs so that skills learned can easily be transferred to other languages and computer applications.) At the end of the semester students develop a final project, usually a game or useful application.

**Prerequisite Courses:** None

**Applies Toward Graduation Requirements of:** 1 Practical Arts credit

**Computer Language 2 - West Only                      Credit 1/2    9, 10, 11, 12**

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**Course Name    Semester 2    Grade Level**

**Course Description:** The coursework starts where Computer Language 1 leaves off and involves problems that challenge the student in Blitz 3D and introduces them to advanced computer programming concepts. The emphasis is on a “structured” approach to programming so that skills learned can easily be transferred to other computer languages and applications. At the end of the semester students develop a final project, usually a game or useful application.

**Prerequisite Courses:** Successful completion of Computer Language 1

**Applies Toward Graduation Requirements of:** 1 Practical Arts credit

**Computer Language 3 - West Only                      Credit 1/2    10, 11, 12**

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**Course Name    Semester 2    Grade Level**

**Course Description:** Working with Blitz3D and Visual Basic, students will design a variety of useful programs. A portion of the semester emphasizes programming within a windows environment. The remainder of the semester is applied to students learning to program in a 3D environment. Students will apply higher level programming skills with new software controls to further enhance their programming abilities. A final project is required at the end of the semester.

**Prerequisite Courses:** Successful completion of Computer Language 2

**Applies Toward Graduation Requirements of:** 1 Practical Arts credit

