

TECHNOLOGY EDUCATION

Subject	Course#	Credits	Grade Level				Prerequisites and related info
			9	10	11	12	
CONSTRUCTION TRADES							
Architectural Drafting (2 terms)	070611 070612	1		X	X	X	Algebraic Principles or Algebra strongly recommended.
Engineering Drafting (2 terms)	070211 070212	1	X	X	X	X	Algebraic Principles or Algebra strongly recommended.
Wood Technology	041711	0.5	X	X	X	X	None
Wood Technology II	041721	0.5	X	X	X	X	Wood Technology
Constructional Technology I	041712	0.5	X	X	X	X	None
Construction Technology II	041713	0.5	X	X	X	X	Construction Technology I
Constructional Technology III	041714	0.5	X	X	X		Construction Technology II
Student Built Home Building Construction Techniques I (CON170) Building Construction Techniques II (CON171)	041511 041513	4.0				X	Construction Technology I, II, and III strongly recommended; a written application and instructor's recommendation is required. Additional screen criteria will be applied if enrollment exceeds capacity. Student must have own transportation. 12 college credits 🏠
MANUFACTURING							
Introduction to Electronics (1 term)	044111	0.5	X	X	X	X	Algebraic Principles or Algebra
Introduction to Robotics	162611	0.5		X	X	X	Algebraic Principles or Algebra
Metals, Materials, & Processes	241211	0.5	X	X	X	X	None
Advanced Metals, Materials, & Processes	241221	0.5	X	X	X	X	Metals, Materials, & Processes
Know Your Car	090111	0.5	X	X	X	X	None (Central and North ONLY)
Basic Auto Mechanics	090121	0.5	X	X	X	X	None
Advanced Auto Mechanics	090131	0.5	X	X	X	X	Basic Auto Mechanics
Auto Technology I Automotive Shop Safety (AUT115)	091211	0.75			X	X	Advanced Auto; successful completion of entrance or permission of teacher required. Additional screening criteria will be applied if enrollment exceeds capacity. Students are responsible for their own transportation if class is an early bird offering. Open to all schools but taught at West. 13 college credits. 🏠
Automotive Brake System & Services (AUT524)	091212	0.75			X	X	
Automotive Suspension & Steering (AUT404)	091213	0.75			X	X	
Automotive Engine Repair (AUT164)	091214	0.75			X	X	

Auto Technology II	091241 091242 091243 091244	3				X	Auto Technology II; application, counselor and instructor recommendation required. Open to all schools but taught at West and North.
WELDING							
Basic Mig Welding	241414	0.5	X	X	X	X	None
Basic Stick Welding	241415	0.5	X	X	X	X	Mig Welding
Advanced Welding	241421	0.5	X	X	X	X	Basic Welding
<u>Voc. Welding I</u>	WEL274 WEL275 WEL256 WEL123 WEL192	3.0	X	X	X	X	Advanced Welding: application required. Students will be responsible for providing their transportation if class begins before school as an early bird offering. Open to all schools but taught at West. 15.5 college credits. ♣
<u>Voc. Welding II</u>	WEL257 WEL215 WEL416 +1 indep. study	2.0				X	X Students will be responsible for their own transportation if class begins before school as an early bird offering. Open to all students but taught at West. 9.5 college credits. ♣

College Credits and Transfer Key

+	Transfers to some state colleges as equivalent course.
♣	Transfers to some state colleges as elective credit.
◆	Nontransferable at some colleges

TECHNOLOGY EDUCATION COURSE DESCRIPTIONS

IMPORTANT NOTE Material fees are required in many of these courses.

CONSTRUCTION TRADES

Architectural Drafting 070611, 070612 1 credit

This course will teach the basic skills needed to draw plans for homes. Students will learn construction techniques used to build structures. Hand drafting tools and computers will be used in this class.

Engineering Drafting 070211, 070212 1 credit

This course teaches the basics of mechanical drafting using hand tools and computers. Students will learn how to represent objects on paper as well as on the computer. Application of mathematical concepts to drafting will be included.

Wood Technology 041711 0.5 credits

The fundamentals of hand tools and machine woodworking will be taught through lecture, demonstration and activities. Students will construct and apply a finish to a small wood item to develop skill in the use of tools and techniques. Safety will receive special emphasis. There is an additional fee for materials.

Wood Technology II 041721 0.5 credits

Students will study wood finishing and wood identification. Students will construct an advanced wood project using power woodworking machines. There is an additional fee for materials.

Construction Technology I 041712 0.5 credits

Construction Technology I exposes students to career opportunities in the construction trades. Students will learn safety, tools, math and basic carpentry.

Basic Auto Mechanics

090121

0.5 credits

This is an introductory course dealing with the importance of construction and operating principles of the modern automobile. Operating systems such as brakes, electrical and basic engine construction and operation will be covered in both textbook (theory) and lab (practical) instruction.

Advanced Auto Mechanics

090131

0.5 credits

A continuation of Basic Auto Mechanics, this course deals with service procedures and repair techniques. The use of modern diagnosis protocols dealing with computerized controls will also be covered. Occupational outlook and preparation are stressed.

Auto Technology I (AUT115, 524, 404, & 164) 091211, 091212, 091213, 091214 3 credits

Students enrolled in Auto Tech I will receive college credit for 4 different community college courses. The shop safety course is designed to acquaint students with proper personnel and shop safety procedures needed to function in an automotive shop. The suspension and steering course deals specifically with automobile suspension and steering systems. Competencies that are developed are aimed at entry-level skills as a suspension and steering specialist. The engine repair course is designed to allow students to begin the mastery of brake system used on today's cars and light trucks. Basic theory of two-cycle and four-cycle gasoline engines and their application will be introduced. Disassembly, inspection and reassembly skills will be learned as well as cooling, lubrication, injection, exhaust, compression and valve systems. Upon successful completion of these courses, students will be prepared to take the corresponding ASE certification test. This course awards college credit.

Auto Technology II

091241, 091242, 091243, 091244 3 credits

This course will focus on the practical application of skills learned in Auto Technology I. The majority of time will be spent servicing customer vehicles. Students participating in this class will participate in a two-week internship at a local automotive dealership and will design, implement and produce a group project relating to the automotive industry. They will also operate the auto lab as a dealership service area scheduling all repair work and work schedules of the others in the class. An application must be completed. A screening process that takes into consideration attendance, discipline record, Auto Technology I grades and a recommendation from a teacher and counselor will be used to determine final participants. Auto Technology I is a prerequisite.

WELDING

Basic Mig Welding

241414

0.5 credits

Basic Mig Welding is the first class in the welding program sequence which culminates at the Vocational level for students who want to pursue a career in manufacturing or construction. Students will learn the most widely used welding process in the world to complete basic weld joint constructions as well as learn to operate in a full functioning industrial manufacturing environment. Welding cap and gloves will be required.

Basic Stick Welding

241415

0.5 credits

Basic Stick Welding is the second class in the welding program sequence which culminates at the Vocational level for students who want to pursue a career in manufacturing or construction. Designed to introduce students to the process used in many skilled trades arenas such as pipefitters and ironworkers, basic stick welding is another globally popular method of joining metal together. Welding cap and gloves will be required.

Advanced Welding

241421

0.5 credits

Provides additional skill and knowledge in using the arc, oxyacetylene and MIG welders. The student will also learn to use the TIG welder and become knowledgeable of its use in industry.

Vocational Welding I

WEL274, 275, 256, 192, 123

3 credits

The Vocational Welding Program is registered with the American Welding Society as a participating SENSE Program which provides successful completers with entry-level certifications recognized all over the world by welding professionals. Class begins at 6:45 a.m. and runs for the entire school year. An application must be submitted to be considered. This course includes the following concurrent enrollment courses: Shielded Metal Arc I Sense I (WEL274), Shielded Metal Arc II Sense I (WEL275), Gas Metal Arc (WEL256), Gas Tungsten Arc (WEL192), and Welding Symbols (WEL123). This course awards college credit.

Vocational Welding II

WEL257, 215, 416, +1 independent study

2 credits

Designed to build on the fundamentals of the Vocational Welding I program; this fourth course focuses heavily on real-life job site preparedness and responsibilities. Safety attitudes, fabrication techniques, Individual and team projects and certification level welding skill attainment are all outcomes of the program. An application must be submitted. Selection will focus on the successful completion of Vocational Welding I, attendance, disciplinary history, graduation requirements and safety history in Technology Education courses. This is a senior level course, which meets five days a week, for approximately ninety minutes a day. This course includes the following concurrent enrollment courses: Flux Core Arc (WEL257), Shielded Metal Arc Adv I (WEL215), and Adv Gas Metal Arc (WEL416). This course will include a capstone project. This course awards college credit a welder certification.