Wentzville School District

Lewis & Clark Career Center

Current Program Descriptions

2016-2017

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AUTO COLLISION REPAIR

This course is open to juniors who have an interest in auto collision repair as a wage earning occupation.
One year of the two year program students will learn non -structural repair methods. These include mig welding, straightening and aligning sheet metal, applying and shaping plastic fillers, plastic panel identification and plastic repair methods.

The other year will concentrate on painting and refinishing. Students will learn proper paint preparation procedures, masking techniques and detailing cars. Primer, sealer and basecoat/clearcoat application will be covered along with paint defect identification and repair. Proper spray gun techniques will be taught and practiced with lots of hands on spraying of primers, paints and clears.

Both years customer satisfaction, measuring and damage analysis along with writing a damage report will be covered. The course is geared to prepare students for entry level auto collision repair and to help prepare for the ASE (Automotive Service Excellence) certification tests.

The curriculum is based on the I-CAR (Inter-Industry Conference on Auto Collision Repair) instruction which is used throughout the course. Students will have the opportunity to earn the I-CAR ProLevel 1 in Non-Structural Repair and Refinishing Certification.

2 year program; 3 units of credit per year

AUTO SERVICE TECHNOLOGY

This course is open to individuals who have an interest in auto service trades in terms of a career goal. It is recommended that students have credit in general shop, general metals course and basic computer skills.

Automotive instruction at Lewis & Clark consists of a two-year program that provides the student with the basic theory and skills needed to become an entry level automotive technician and service today's automobiles. Classroom instruction is followed by shop activities related to the lecture. Customer cars are repaired in the same manner as in the professional shop under the instructor's supervision. Students will gain experience in shop management by writing repair orders, ordering parts, issuing supplies and tools used in the trade.

This course is ASE (Automotive Service Excellence) certified by NATEF (National Automotive Technician Education Foundation). Both NATEF and ASE are nationally recognized and provide certification for shops and technicians across the country.

Areas of instruction include: Engine Repair, Brakes, Steering and Suspension, Heating / Air Conditioning, Electrical / Electronics, Engine Performance, Manual/ Automatic Transmission (Basic)

Instructional time is (approximately) 50% class and 50% lab.

2 year program; 3 units of credit per year

BRICK & STONE MASONRY

This program is designed to prepare students for apprenticeship or entry-level jobs in masonry construction. Students will learn to lay brick and block in various bond patterns used in commercial and residential construction. This will include construction techniques for building fireplaces and chimneys, arches, special wall openings, double wythe and reinforced masonry, wall anchoring systems, flashings and prevention of water penetration and masonry paving. Students will also gain knowledge of various types of stone construction and tuck-pointing.

Units of study will cover safety practices and procedures; tools and equipment used in masonry construction; properties, sizes and uses of clay and concrete masonry units; experience in laying brick, block and stone in various bond patterns; reinforced masonry walls; masonry veneer construction; layout and construction of fireplaces and chimneys; mathematics for masonry and measuring systems; blueprint reading and construction plans.

Students must be able to work at heights on scaffolds, lift and handle heavy materials, work in group situations as a team member, follow instructions and accomplish all tasks in an accurate and safe manner.

2 year program; 3 units of credit per year

BUILDING TRADES—CARPENTRY

This course is open to juniors who show an interest and aptitude in the field of construction as a wage earning occupation.

Students are familiarized with entry level skills for the major trades involved in residential construction such as carpentry, siding, interior trim, drywall hanging, roofing, concrete work and landscaping.

Most of the program involves the actual building of a house in Lewis & Clark Career Center's own subdivision. Students not only gain experience in home construction, but also will learn about subdivision construction. Houses are sold upon completion. Students will gain experience in building both a single and a two-story dwelling.

It is recommended that students have one year of industrial arts.

2 year program; 3 units of credit per year

COMPUTER INFORMATION SYSTEMS

1st Year

This program is open to juniors and seniors who have an interest in computer programming or database administration as a wage earning occupation or post-secondary degree.
Students will learn beginning and intermediate business programming and business communication concepts. They will learn the basics of the Python programming language and design skills. The students will complete a final project that will incorporate all facets of the class.

Students who successfully complete this program will be able to develop business and other forms of software application. Graduates may be employed by software development or consulting firms, or may continue on to a college level degree program.

1 year program: 3 units of credit. ***Prerequisites: 10th grade reading and 8th grade or higher math.***

2nd Year

This program is open to seniors who have an interest in more advanced computer programming or web design as a wage earning occupation or post-secondary degree.
Students will choose at least three of the following modules: C++, HTML, Linux Administration, Advanced Python, Ruby, or Database design. These modules will be completed either independently or collaboratively, depending on how many other students choose the same module. Additionally, 2nd year students will also act as assistants during lab sessions for the 1st year students. Each 2nd year student will develop one lesson plan, with the instructors help, to deliver to the 1st year class.
Students who successfully complete this program will be able to develop advanced applications in their chosen path. Graduates may be employed by software development or consulting firms, or continue on to a college level degree programs.

1 year program; 3 units of credit

COMPUTER MAINTENANCE AND NETWORKING

This program is open to juniors and seniors who have an interest in computers and the Information Technology field. This class learns about computer operating systems, hardware and basic networking. The class prepares you to take the CompTIA A+ exams; an IT technician certification.

Students who successfully complete this program will be able to work as an entry level help desk technician, a computer repair technician, or a computer support technician in all types of business and industry. This class also prepares you for future study in the hardware, operating systems or networking fields. An interest in technology & computers, keyboarding skills and familiarity with Word & PowerPoint are essential.

The program has articulation agreements with State Technical College of Missouri (formerly Linn State) and St. Charles Community College.

1 year program: 3 units of credit

EARLY CHILDHOOD CAREERS

This course will prepare students for entry level employment in the field of early childhood education, while providing the foundations for study in higher education programs that lead to certification in early childhood or elementary educations.

Students will gain leadership, employment, and communication skills necessary for success in Early Childhood Careers. Over the course of the program students will explore career opportunities and identify personal traits needed for success in careers working with young children. They will be given opportunities to work directly with children ranging in age for birth to age 8 in various child-care and elementary settings. Students will earn certification in infant, child, and adult CPR. Students completing this program will be able to describe typical child development, demonstrate knowledge of creating safe and healthy learning environments, and be competent in lesson planning and implementation. Students will practice appropriate behavior management techniques, and will learn about nutritional guidelines, state licensing expectations, and the legal and ethical responsibilities of child care workers and/or classroom teachers.

Due to our site rotations, students must have a TB test and a criminal background check to participate in this program.

1 or 2 year program; 3 units of credit per year

Prerequisite: prior Child Development course recommended

ELECTRICAL TRADES

This course will teach students to identify, install, and troubleshoot electrical wiring and associated devices that are commonly used in both residential and commercial environments. Students will participate in the construction of a new house. The program includes switches, receptacles, lighting, low voltage communications wiring, service installation, and other wiring associated with residential electricity. Students will also learn fundamental commercial wiring including Start – Stop Stations, single and 3 phase motors, and transformers.

Students must be physically fit and capable of working under adverse weather conditions including both very hot and freezing cold. We work during all types of weather on the school house. We work with real circuits, so the ability to abide by strict safety rules is extremely important. An aptitude for math in general and algebra in particular is required, as is an aptitude to read and produce technical documents and drawings.

2 year program; 3 units of credit per year

Prerequisites: Algebra with a "C" or higher, Read at or above Grade Level

HEALTH OCCUPATIONS/ HEALTH RELATED OCCUPATIONS

The Health/Health Related Occupations courses offer learning experiences for juniors and seniors in high school designed to create or further stimulate their interest in the many career opportunities available in the health field. This course is designed to be challenging and meet the needs of all learning styles. The student will learn beginning skills and the basic procedures needed for an entry-level job and a sound basis for continuing their education in the medical field.

The first semester involves classroom theory, demonstrations and practice. During the second semester, students begin to draw upon previously acquired knowledge and basic skills by applying them to various health services through supervised clinical observations and experiences. Students must have an up to date immunization record, a TB test, a urine drug screen, a criminal background check, a flu vaccine, and maintain a 75% average and 90% attendance to remain in the program and be placed in clinical rotations. Students are placed in clinical rotations Monday through Thursday and continue classroom work on Fridays.

1 year program; 3 units of credit

HVAC

This course will provide students with training in heating, ventilation, air conditioning, and refrigeration to qualify them for employment as an apprentice or helper assistant to an A/C mechanic in service and/or installation of equipment.

The course will cover tool selection and use, tubing, piping, brazing, soldering and basics of vapor compression refrigeration, air conditioning & heating systems. Electric circuits and components, troubleshooting, basic sheet metal, customer relations, and preparation for the EPA exam will also be covered.

Applicants should have a good mechanical aptitude and be able to understand both written and verbal instructions. Students should be in good physical condition and free from respiratory problems.

2 year program; 3 units of credit per year

Prerequisite: Algebra

POWER EQUIPMENT TECHNOLOGY

This program prepares juniors and/or seniors to diagnose and repair two- and four-cycle engines on such equipment as lawn mowers, chainsaws, roto tillers, edgers and trimmers. Power equipment instruction ranges from home-use equipment to commercial equipment.

Students will learn to adjust, clean, lubricate and when necessary replace worn or defective parts such as spark plugs, ignition parts, valves and carburetors. Other skills taught include wheel alignment, deck repair, blade balancing, blade and chain sharpening, battery testing and electrical repair. Troubleshooting and problem solving on all types of equipment are stressed.

Good reading skills are required, as students will need to be able to refer to service manuals for detailed directions.

1 or 2 year program; 3 units of credit per year
College credit can be purchased through The University of Central Missouri (optional) .

WELDING

Combination welding is open to students interested in welding and metal working as an occupation. Students are instructed in shop safety and the proper procedures for each welding process.

Oxy fuel cutting, arc, mig and tig welding, plasma cutting, and air arc cutting processes are taught in all four weld positions and on the five basic weld joints. Metallurgy, blueprint reading, reading a tape measure, metal fabricating techniques and weld symbols are included in the program.

The lab is set up to simulate the welding industry. Students are evaluated by written tests and by testing their welds as specified by the American Welding Society code.

Students interested in a career in welding should have good eye/hand coordination, mechanical aptitude, and manual dexterity, freedom from asthma, allergies and physical disabilities which prevent bending, stooping, lifting and working in awkward positions.

2 year program; 3 units of credit per year

Prerequisite: Asthma Free