

Wilco Area Career Center

Wilco Area Career Center is the result of a cooperative agreement among the high schools of several school districts, including: Lemont High School District 210, Lockport High School District 205, Plainfield School District 202, Reed-Custer School District 255, Valley View School District 365, and Wilmington School District 209. By joining together in a centralized facility, the participating schools offer their students a variety of quality vocational and technical education programs in a cost-effective manner. Wilco's programs offer students career-based courses that provide skills necessary to succeed in the workforce. Courses are scheduled at the student's home school; some programs or levels may not be available each session. Lemont students typically attend Session 2 (9:55-11:55 a.m.).

ACE: Architecture, Construction Management and Engineering

Grades Course Open To: 12 **Credit:** 3.0 - Honors credit

Prerequisite: Grade of C or better in all Mathematics courses

Dual/Articulated Credit: 12.0 hours (ARCH 100, CM 100, EGR 105/AEC 299, AEC 106, OPS 111, SET 100) of dual credit through Joliet Junior College

Description: This program is designed to provide seniors with a broad overview of the skills and knowledge necessary to pursue an exciting career in the fields of architecture, construction management and engineering. Through relevant and challenging college courses, students receive a solid foundation in the introductory and fundamental coursework in the professional tracks of the building industry. The ACE program has been designed for students interested in the built environment and who are considering career pathways in the field of architecture, engineering or construction management. With 12 hours of college credit to be earned, students explore each discipline and can apply those credits to the track best suited to their interest for further study. **Note:** Students must provide their own transportation to and from Joliet Junior College's main campus (1215 Houbolt Road, Joliet) and the class will meet from 12:30-2:30 p.m. Students must complete a separate application for this program.

Advanced Integrated Manufacturing

Grades Course Open To: 12 **Credit:** 3.0 - Honors credit

Prerequisite: None

Dual/Articulated Credit: 14.0 hours (IMT 101, IMT 121, EEAS 101, EEAS 111) of dual credit through Joliet Junior College

Description: This program affords students the opportunity to build skills and awareness in heating, ventilation and air conditioning, industrial maintenance, basic wiring/circuit design, and industrial fluid power. Students learn about OSHA safety programs, maintenance physics, hand and power tools, precision measuring, technical diagrams and assembly prints, fastening devices, lubrication, basic pump operation, and basic pipefitting procedures. Students also study the principles of hydraulics and pneumatics as applied to the basic theory of fluids and typical industrial circuits, and build fluid power circuits as applied to industrial applications. The fundamentals of electrical and electronic circuits are taught, including the calculation and measurement of voltage, current, resistance and power. An emphasis is placed on safe meter usage, print reading and exposure to a variety of electrical technologies currently used in industry. The course introduces students to the installation, service, troubleshooting and repairs on various types of electrical controls, circuits and components. Some of the topics covered include: introductory residential wiring, operation of AC motors, industrial solid-state devices, variable frequency drives, industrial controls, and single-phase/three-phase power distribution. Students develop important skills necessary to safely use electronic test equipment on low- and high-voltage components. **Note:** Students must provide their own transportation to and from Joliet Junior College's main campus (1215 Houbolt Road, Joliet) and the class will meet from 7:30-9:30 a.m. Students must submit a separate application to the Technical Department at Joliet Junior College for this program.

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Applied Engineering Technology

Grades Course Open To: 12 **Credit:** 3.0

Prerequisite: None

Dual/Articulated Credit: 11.0 hours (MFG 101, MFG 111, MFG 115) of dual credit through Joliet Junior College

Description: This course gives students an opportunity to focus on the application and implementation of design theory. During the first semester, students will participate in classroom and hands-on shop experiences. In the shop, an emphasis is placed on exercises and projects that embody the basic processes and operations in using hand tools, layout tools and machine tools. In the classroom, an emphasis is placed on theory related information that is essential to set up and operate machine tools and to perform basic processes and operations in the shop. In the second semester, students acquire knowledge and skills related to numerical control (NC) and computer numerical control (CNC) milling and turning machines. The course also includes NC and CNC general concepts and programming procedures, as students gain hands-on experience in programming, setting up, and operating both NC and CNC milling and drilling machines. Students develop a high degree of skill in visualizing and interpreting numerical control prints, sheet metal prints, machining prints, welding prints, and instrumentation and control diagrams. **Note:** Students must provide their own transportation to and from Joliet Junior College's main campus (1215 Houbolt Road, Joliet) and the class will meet from 12:30-2:30 p.m.

Auto Services (Mechanics) I & II

Grades Course Open To: 11-12 **Credit:** 3.0 each year

Prerequisite: None

Fees: Approximately \$50 each for Auto Services I and Auto Services II, as well as dual credit fees (payable to Joliet Junior College)

Dual/Articulated Credit: 3.0 hours (AS 106) of dual credit through Joliet Junior College for Auto Services II

Description: Taught by Automotive Service Excellence (ASE) certified instructors, this two-year program is designed to train students for entry-level automotive technician positions or prepare them for post-secondary programs. In preparation for this course, students need skills in measurement, estimation and algebra, and would benefit from a technology course. First-year students develop skills in vehicle maintenance and repair - including brakes, steering and suspension - and also learn the basics of electrical and engine performance (sensors). Second-year students continue their training in electrical and engine performance after successfully completing the first year, and use labs to diagnose electrical circuits, sensors, drivability problems, check engine lights and emission-related problems. Upon completion of the two-year course, students may earn college credit towards Nashville Auto-Diesel College, College of DuPage or Joliet Junior College. The curriculum follows the National Automotive Technicians Educational Foundation (NATEF) format. The program prepares students for ASE certification. Students are required to purchase appropriate clothing and safety gear. Students are encouraged to continue their training through an appropriate technical school, college or university. **Note:** Auto Services II may be taken as an "early bird" class that meets from 6:25-7:45 a.m. Students who wish to select this option must inform their counselors at the time of registration, and must provide their own transportation.

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Aviation Mechanics

Grades Course Open To: 12 **Credit:** 3.0 - Honors credit

Prerequisite: Grade of C or better in Integrated Math I, Integrated Math II and Integrated Math III (all levels), grade of C or better in Physics or AP Physics I, and cumulative GPA of 3.0 or better

Dual/Articulated Credit: 8.0 hours (AVMT 10600, AVMT 11000) of dual credit through Lewis University

Description: This course offers students a blended learning environment, with classroom assignments through Wilco and lab assignments at Lewis University. The fall semester follows the curriculum for Aviation Fundamentals, with students learning about aerodynamics, aircraft design, stability, control, Federal Aviation Administration regulations and publications, weight and balance, and ground handling of aircraft. The second semester follows the curriculum for Aircraft Structures 1, where the focus is riveting and sheet metal repair, forming and layout, and oxyacetylene welding operation. Corrosion and corrosion control also are covered. **Note:** Students must provide their own transportation to and from Lewis University (1 University Parkway, Romeoville) and the class will meet from 7:30-9 a.m.

Barbering

Grades Course Open To: 11-12 **Credit:** 3.0

Prerequisite: None

Fees: Course fee ranging from \$2,500 to \$3,900, depending on the program

Description: This program offers two tracks – a two-year program for juniors, and a 13-month program for seniors. The barbering program is offered at Champions Beauty and Barber University, which is licensed by the Illinois Department of Financial and Professional Regulations (Division of Professional Regulation) and meets all state and federal regulations. This course offers students curriculum in both theory and practice in the following areas as they relate to the practice of barber science and art: anatomy; physiology; skin diseases; hygiene and sanitation; barber history; barber law; hair cutting and styling; shaving, shampooing, and permanent waving; massaging; and barber implements as they relate to the Barber, Cosmetology, Esthetics, and Nail Technology Act. Knowledge, skills and activities completed in this course include advanced theoretical and practical skill development, building to the 1500 hours of study needed to prepare students for the barbering license exam. Upon completion of the course, students are eligible to sit for their state certification. Students must provide their own transportation.

Business Logistics

Grades Course Open To: 11-12 **Credit:** 3.0 - Honors credit

Prerequisite: None

Fees: Dual credit fees (payable to Joliet Junior College)

Dual/Articulated Credit: 11.0 hours (SCM 100, SCM 110, SCM 120, SCM 140) of dual credit through Joliet Junior College

Description: This program emphasizes the essentials of supply chain and operations management, the transportation and distribution process, cargo security compliance, and import and export fundamentals, as well as the professional business and communication skills required to excel in the field. The program includes a sequence of four courses: Transportation and Physical Distribution, Introduction to Supply Chain Management, Introduction to Import/Export, and Transportation and Cargo Security. In order to complete the Global Supply Chain Certificate, students should begin either Business Logistics or Business Management as juniors; these courses can be taken in either order.

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Business Management

Grades Course Open To: 11-12 **Credit:** 3.0 - Honors credit

Prerequisite: None

Fees: Dual credit fees (payable to Joliet Junior College)

Dual/Articulated Credit: 12.0 hours (BUS 110, BUS 111, MGMT 102, SCM 130) of dual credit through Joliet Junior College

Description: This course provides students an avenue to earn the Customer Service Certificate of Completion from Joliet Junior College. Coursework provides students with a foundation in business communication, human relations, operations management, principles of excellence in customer service, and professional business skills. Students graduating with this certificate are prepared to enter the customer service field in entry level positions in customer service, operations, and management fields.

Certified Nursing Assistant

Grades Course Open To: 11-12 **Credit:** 3.0 - Honors credit (Accelerated CNA Program only)

Prerequisite: Successful completion of Introduction to Health Professions; students must be 18 years or older when clinical sites begin in January

Fees: Approximately \$100, as well as the cost of the State of Illinois Certified Nursing Assistant (CNA) exam and dual credit fees (payable to Joliet Junior College)

Dual/Articulated Credit: 6.0 hours (NA 101) of dual credit through Joliet Junior College

Description: This program is structured to prepare students for employment as a Certified Nursing Assistant (CNA). The curriculum includes all standards and procedures contained in the Illinois Department of Public Health Certified Nurse Aide Instruction Model. Students may take the state's CNA examination after completing 40 hours of on-site clinical experience at a local nursing facility. Students must provide their own transportation to clinical sites. After completing the course, students are prepared to pursue a number of careers in the health care field, including: registered nurse, physical therapist, respiratory therapist and ultrasound technician, among others. Students are required to wear appropriate clothing at clinical sites. **Note:** An Accelerated Certified Nursing Assistant program is available for seniors only. Students prepare for employment as a Certified Nursing Assistant during the first semester before transitioning to a work-based learning experience at AMITA St. Joseph Hospital in Joliet in the second semester.

Cisco, Security, and Internetworking

Grades Course Open To: 12 **Credit:** 3.0 - Honors credit

Prerequisite: None

Dual/Articulated Credit: 12.0 hours (CIS 123, CIS 162, CNT 101, CNT 102) of dual credit through Joliet Junior College

Description: This program includes four college-level courses: Network Fundamentals and Router Protocols and Concepts in the fall semester, and Linux Essentials Network Development Group and Wireless Foundations in the spring semester. In Network Fundamentals, students study the devices and protocols used to connect computers and support devices into a network, covering OSI model (layers 1 & 2), IP and MAC addresses, TCP, ARP and RARP. In Route Protocols and Concepts, students concentrate on router configuration and how remote networks are established and connections are maintained. In Linux Essentials Network Development Group, students develop technical proficiency to work on the Linux command line and work with the open-source industry. Finally, in Wireless Foundations, students work with wireless protocols, services, and devices while facilitating a wireless network. **Note:** Students must provide their own transportation to and from Joliet Junior College's north campus (1125 W. Romeo Road, Romeoville) and the class will meet from 10-11:30 a.m.

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Computer Technology

Grades Course Open To: 11-12 **Credit:** 3.0 - Honors credit

Prerequisite: None

Fees: Dual credit fees (payable to Joliet Junior College)

Dual/Articulated Credit: 10.0 hours (CIS 122, CIS 145, CIS 275) of dual credit through Joliet Junior College

Description: This course consists of three portions: Computing Information Systems Fundamentals, Data Communications and Networking, and A+ Guide to Managing and Maintaining Your PC. Computing Information System Fundamentals presents an introductory study of information systems, computer programming and application software. Data Communications and Networking discusses basic concepts of Local Area Networking and includes an introduction to Wilde Area Network. Finally, A+ Guide to Managing and Maintaining Your PC investigates the hardware components of the personal computer and emphasizes diagnosing and maintaining the PC; this begins to prepare students for the A+ exam.

Construction Management

Grades Course Open To: 11-12 **Credit:** 3.0

Prerequisite: Grade of C or better in all mathematics courses

Description: The course focuses on the knowledge, hands-on skills and workplace skills applicable to construction. Major units of instruction include: personal safety, hand tools, power tools, blueprint reading, surveying, construction, landscaping, turf management and business. Students hone carpentry skills in framing, roofing and finishing, and develop career readiness skills in the areas of teamwork, communication, work ethics, problem solving and adaptability. Supplemental units may be provided in plumbing, electricity, concrete, block laying, drywall and painting. A variety of career options are examined, including agricultural engineer, carpenter, plumber, electrician, concrete and block layer, finisher, safety specialist, landscape design, turf management, among others..

Cosmetology

Grades Course Open To: 11-12 **Credit:** 3.0

Prerequisite: None

Fees: Course fee ranging from \$1,800 to \$7,500, which varies by cosmetology school and is subject to change

Description: This course is open to students to attend a state-approved school of beauty culture. The professional school provides the facility, instruction and clinical training as prescribed by the Illinois Department of Registration and Education. Students must provide their own transportation. Program applications for first-year students must be completed in early January for the beauty school.

Criminal & Social Justice Studies

Grades Course Open To: 11-12 **Credit:** 3.0

Prerequisite: Placement into ENG 101 or a grade of C or better in ENG 021 or ENG 099

Fees: Dual credit fees (payable to Joliet Junior College)

Dual/Articulated Credit: 6.0 hours (CRJ 100, LENF 103) of dual credit through Joliet Junior College

Description: This course provides students with an introduction to the nature of crime, examination of criminological theories and models, methods of preventing or reducing the commission of crime, and prosecution and punishment of offenders. Students apply a clear understanding of preconditions and limitations of legal searches as outlined in our Constitution. Students apply theories and concepts to the current work environment, evaluate photographs of criminal investigations, identify basic rules of evidence, and apply policing concepts through hands-on activities. Students also study components, purposes, and functions of criminal law, as well as the elements necessary to establish crime and criminal intent. Actual case studies allow students to explore sources of criminal law, attempts and conspiracy, criminal responsibility, defenses to crime, laws of arrest, search and seizure, and civil law.

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Culinary Arts I

Grades Course Open To: 11-12 **Credit:** 3.0

Prerequisite: Successful completion of Food Preparation is recommended

Fees: Approximately \$65, as well as dual credit fees (payable to Joliet Junior College)

Dual/Articulated Credit: 5.0 hours of dual credit (CA 105, CA 106) through Joliet Junior College; articulated credit also is available through many institutions

Description: This course provides students with the opportunity to build interest and master essential hands-on culinary techniques and theoretical academics for a career in the hospitality industry. Wilco's commercial kitchen allows students to complete rotations in hot and cold food preparation, catering, bake shop, and equipment maintenance. In-depth instruction is provided about culinary workplace employment skills, managerial information, and food and nutritional knowledge. Math, research, and essay writing all are part of the curriculum, as is hands-on activity; all of these skills are necessary to succeed in the program. Students have the opportunity to compete, and should enjoy creativity, be detail oriented, and demonstrate compatibility with various personalities. In addition to dual and articulated credit opportunities, students also may obtain state sanitation certification; Illinois Restaurant Association and National Restaurant Association certification; ServSafe manager sanitation certification; and scholarships. Students are required to participate in at least 10 hours per semester of outside community activity (not including field trips), as offered by the instructor. Permitted field trips are offered as additional time outside of the required class activity, and are instrumental to education within the hospitality industry. Students are required to have appropriate clothing and shoes for lab participation.

Culinary Arts II: Hospitality Careers and Event Planning

Grades Course Open To: 12 **Credit:** 3.0

Prerequisite: Successful completion of Wilco's Culinary Arts I, or Food Preparation and Culinary Arts is recommended

Fees: Dual credit fees (payable to Joliet Junior College)

Dual/Articulated Credit: 6.0 hours of dual credit (HOSP 110, HOSP 148) through Joliet Junior College; articulated credit also is available through many institutions

Description: This course is designed to help students develop outstanding customer service skills. Students learn how to interact with customers, resolve conflicts, understand the importance of customer satisfaction/retention, actively participate as a member of a team, and develop time management skills. In addition, students develop the skills needed to become successful event managers. Students design, plan, market and stage an event. Staffing, risk management, event evaluation, and legal and financial concerns also are addressed.

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Early Childhood Education I & II

Grades Course Open To: 11-12 **Credit:** 3.0 each year

Prerequisite: None

Fees: Approximately \$30, as well as dual credit fees (payable to Joliet Junior College)

Dual/Articulated Credit: Possible 12.0 hours (CDEV 101, CDEV 137, CDEV 201, CDEV 216) of dual credit through Joliet Junior College

Description: This program is designed to train students in the field of Early Childhood Education (ECE). Students participate in assistant teaching by working directly with children (ages 3-5) in the Wilco Preschool Lab. First-year students complete training for the first level of the ECE credential. The curriculum provides basic knowledge and skills for those working with, or seeking to work with, young children. Some of the topics addressed include: health, safety and nutrition, how children learn, observation and assessment, family and community relations, and the development of school-aged children. Students may earn their credentials after successfully completing all modules and meeting attendance requirements. Second-year students continue to teach in the preschool lab as “experienced teachers.” Subject matter includes child development, child care, and issues in education. Assignments include working individually with preschool children to create “case study books.” Internships at child care sites are available for second-year students who qualify academically.

Emergency Medical Services

Grades Course Open To: 12 **Credit:** 3.0 - Honors credit

Prerequisite: Grade of B or better in Fire Science, or grades of B or better in three science courses; TB test and drug test for students pursuing dual credit

Fees: Approximately \$100, as well as the cost of the Emergency Medical Technician (EMT) Basic exam

Dual/Articulated Credit: 10.0 hours (FIRE 2271) of dual credit through College of DuPage

Description: This program focuses on preparing students for the multiple career areas related to the Fire Service and Health Care fields. In the first semester, students learn about equipment and the assessment used to stabilize victims before the arrival of an ambulance. Students who earn a grade of C or better in the first semester continue into the second semester, which focuses on the care, handling and extrication of the critically ill and injured. Topics include airway management, patient assessment, vital signs, cardiopulmonary resuscitation (CPR), lifting and moving patients, documentation, communication, pharmacology and cardiac emergencies. A heavy emphasis is placed on medical terminology. The program requires students to spend a minimum of eight hours off-campus in a hospital emergency room, and a minimum of 16 hours that meet the state clinical time objectives on Advanced Cardiac Life Support (ACLS). Clinical time may be extended to meet the clinical objectives defined by the Illinois Department of Public Health. Students who successfully complete the course may take the EMT Basic exam. Daily attendance is crucial to student success in this course.

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Fire Science

Grades Course Open To: 11-12 **Credit:** 3.0

Prerequisite: None

Fees: Approximately \$75, as well as dual credit fees (payable to Joliet Junior College)

Dual/Articulated Credit: 7.0 hours (FIRE 1100 and FIRE 2283 at COD, FIRE 101 and EMS 101 at JJC) of dual credit through College of DuPage and Joliet Junior College

Description: This course follows the curriculum set forth by the State of Illinois Fire Marshal's Office, the Illinois Department of Health, and the Department of Transportation. Students learn the essentials of firefighting through classroom and guided activities. Topics include: fire chemistry, building construction, wearing personal protective clothing, identifying ropes, tying knots, using fire extinguishers, performing forcible entry, carrying and raising ladders, operating self-contained breathing apparatus, and auto extrication. Students learn how to employ search and rescue techniques with ventilation tools and practice hose evolutions on an operating engine, all in a safe environment.

Introduction to Health Professions

Grades Course Open To: 11-12 **Credit:** 3.0

Prerequisite: None

Dual/Articulated Credit: 5.0 hours (HLTHS 1100, HLTHS 1110) of dual credit through College of DuPage

Description: This course provides an overview of the health care industry, including medical ethics and law, trends in health care, and the exploration of career options. Students are introduced to college level medical terminology, anatomy and physiology, vital sign measurement, basic math for conversions, standard precautions training, basic cardiac life support skills, and first aid. The goal of the course is to assist students in making an informed choice about health care occupations, and learn basic skills related to all facets of the health care industry.

Landscape & Turf Grass Management

Grades Course Open To: 11-12 **Credit:** 3.0

Prerequisite: None

Description: This course focuses on the landscape, nursery, and turf segments of the horticulture industry. Units of student instruction include identifying landscape plants, designing landscape plans for the Wilco Disc Golf course, hardscape construction techniques, and installing landscape plants. Nursery production, turf grass production, and maintenance of existing landscapes also are explored. Agribusiness units cover calculating prices for work, managing a horticulture business, advertising and sales. A variety of career options are discussed, and improving workplace and computer skills are a focus. Participation in Future Farmers of America (FFA) activities and Supervised Agricultural Experience (SAE) projects are vital for leadership development, career exploration and reinforcement of academic concepts.

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Law Enforcement & Public Safety

Grades Course Open To: 11-12 **Credit:** 3.0

Prerequisite: None

Fees: Dual credit fees (payable to Joliet Junior College)

Dual/Articulated Credit: 6.0 hours (LENF 101, CRIMJ 1145) of dual credit through Joliet Junior College and College of DuPage

Description: This course introduces students to modern policing and the study of law enforcement officers and policing strategies. Students are provided with the history of law enforcement, an in depth analysis of the Constitution, and a career orientation emphasizing the realities of a career in law enforcement at local, state and federal levels. Physical training, career exploration and other police tactic training are incorporated. This course also provides an overview of the evolution of the Department of Homeland Security (DHS) and an analysis of the major policies, practices, concepts and challenges confronting the field. Modern threats from domestic, international, and transnational terrorism are addressed, as are issues stemming from geopolitical conflict and natural disasters.

Medical Assisting

Grades Course Open To: 12 **Credit:** 3.0

Prerequisite: None

Fees: Dual credit fees (payable to Joliet Junior College)

Dual/Articulated Credit: 4.0 hours (MA 102) of dual credit through Joliet Junior College

Description: This program prepares students to become members of a multidisciplinary health care team within an outpatient care setting. Students develop the skills necessary to perform entry-level administrative and clinical procedures, while also learning patient care techniques, functional anatomy and physiology with medical terminology, and some diagnostic and specialty procedures. Medical assistants focus on the medical care of the patient, as well as administrative work. They can administer injections and medications, take the patient's health information, and perform both medical and office tasks.

Nail Technology

Grades Course Open To: 11-12 **Credit:** 3.0

Prerequisite: None

Fees: \$800 course fee

Description: This off-campus course affords students the chance to attend a state-approved school of nail technology. Students develop good communication skills, time management and an eye for detail. An emphasis is placed on all aspects of nail care, nail problems, artificial nails and nail products. Upon completion of the course, students are eligible to sit for their state certification. Students must provide their own transportation.

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Veterinary Assistant I & II

Grades Course Open To: 11-12 **Credit:** 3.0 each year

Prerequisite: Grade of B or better in Biology or successful completion of Biology Honors

Fees: \$30, as well as dual credit fees (payable to Joliet Junior College)

Dual/Articulated Credit: 5.0 hours of dual credit through Joliet Junior College, including 3.0 hours (AGRI 119) for Veterinary Assistant I and 2.0 hours (VET 100) Veterinary Assistant II

Description: This course provides an opportunity for students to learn about animal science and the care of animals, including: the fundamentals of companion animal species and breeds, behavior and training, animal anatomy and physiology, nutrition, and safety. Students develop an understanding of animal reproduction, animal ethics and welfare issues, animal health, veterinary medicine, veterinary office practices, and animal services to humans. Basic skills are developed in the areas of handling large and small animals, grooming animals, feeding animals, and maintaining equipment and facilities. Career exploration focuses on veterinarians, veterinary lab technicians, office lab assistants, small animal production, research lab assistants, and animal nutrition lab technicians. Students are required to be members of the Future Farmers of America (FFA) and participate in FFA activities. Volunteer opportunities at local veterinary offices and/or animal shelters are encouraged. Second-year students have on-site and community internships in preparation for the state exam for the Veterinary Assistant certificate.

Welding and Fabrication I & II

Grades Course Open To: 11-12 **Credit:** 3.0 each year

Prerequisite: None

Fees: Approximately \$90 for both Welding and Fabrication I and Welding and Fabrication II, as well as dual credit fees (payable to Joliet Junior College)

Dual/Articulated Credit: 9.0 hours of dual credit through Joliet Junior College, including 6.0 hours (WLDG 101, WLDG 102) for Welding and Fabrication I and 3.0 hours (WLDG 120) for Welding and Fabrication II

Description: This course helps students learn to perform welds on similar and dissimilar metals using all positions. Their ability to operate, adjust and safely control power sources and gas equipment is essential. In the first year, students learn techniques in relation to braze welding, gas welding, shielded metal arc welding, mig & tig welding, gas cutting and plasma arc cutting. Blueprint reading and the use of weld symbols are also stressed. Students learn to be combination welders and work toward certification. Coursework in the second year develops advanced skills in metal arc welding, brazing and flame-cutting, with instruction focusing on safety practices, properties of metals, electrical principles, and advanced welding methods and equipment. Students utilize mig, tig and semi-automatic equipment to complete various projects and activities. Students develop workplace and transition skills, as well as vocational ethics. Students are required to purchase necessary tools and safety clothing. **Note:** Welding and Fabrication II may be taken as an “early bird” class that meets from 6:30-7:50 a.m. Students who wish to select this option must inform their counselors at the time of registration, and must provide their own transportation.