

## **LIVINGSTON AREA CAREER CENTER (LACC) 2023-2024 CURRICULUM GUIDE**

LACC is designed to help students find their place in the ever-changing workforce. Through practical application and hands-on learning, we can help a student find their way to a fulfilling career or continue their education once they graduate. The content of our programs is designed to engage the student in the process of active learning, enriching their experience.

Enrollment in the Career Center is an excellent way for eligible high school students to get a jumpstart on their college education, engage in career exploration, prepare for a community college or four-year university, and develop skills needed in today's global economy and workforce. Specialized programs of study are available to high school juniors and seniors. Students are instructed by many of the area's top career and technical educators who came from industry. Students also use state-of-the-art equipment and experience hands-on skills learning.

### **Why Choose a Career Center Course?**

- Whether a student plans to pursue a certificate, two- or four-year degree, or perhaps enter the world of work after completion of high school, the Career Center can help students develop skills needed for success.
- Business connections and networking are emphasized and promoted by our instructors. This provides students with the opportunities and resources along with networking connections necessary to gain real world experiences.
- Save money by enrolling in dual credit courses and gaining certifications while in high school and jumpstart your future. See chart below for specifics.
- Programs have internship and job shadowing opportunities with area businesses.
- Tuition and transportation are provided by the student's high school.
- Career Center students with a 3.0 GPA qualify to apply for National Technical Honor Society (NTHS) and be recognized for their efforts in their career and technical courses.
- Each year the Career Center awards thousands of dollars' worth of scholarships to outstanding students representing each of the Career and Technical Education programs.

LACC is proud to offer the fifteen programs listed below. Additional program information is listed on pages 3-8 or on our webpage at [www.lacc.k12.il.us](http://www.lacc.k12.il.us).

Automotive & Diesel Technology I and II  
Certified Nurse Assistant  
Computer Maintenance I and II  
Construction Trades I and II  
Criminal Justice I and II  
Culinary Arts I and II  
Cyber Security/Networking I and II  
Digital Media/Graphics I and II  
Early Childhood Education I and II  
Emergency Medical Technician  
Engineering and Architectural Design I and II  
Fire-Fighting I and II  
Inter-Related Cooperative Education  
Medical Terminology & Health Careers  
Welding Technology I and II

## Dual College Credit, Certificates, and Certification Information:

Livingston Area Career Center has worked with the area community colleges to establish opportunities that will allow students to also earn college credit upon successful completion of course. Programs and certificates or certifications are continually updated. Interested students should contact LACC to receive current information.

Course	Certificates	Certifications	Dual Credit
<b>Automotive &amp; Diesel Technology</b>			1 Credit - OSHA Certification
<b>Certified Nurse Assistant (C.N.A)</b>		Certified Nurse's Assistant *American Heart Association Health Care Provider BLS CPR	HCC 8 Credits - NURS 110
<b>Computer Maintenance</b>		CompTIA A+	HCC 6 Credits - NETW 150, NETW 151
<b>Construction Trades</b>		OSHA 10	1 Credit - OSHA Certification
<b>Criminal Justice</b>		*American Heart Association Health Care Provider BLS CPR	
<b>Culinary Arts</b>		*ServSafe Manager *Illinois Food Handlers *ServSafe Food Allergens	JJC 2 Credits - CA 106 3 Credits – CA 105
<b>Cyber Security/Networking</b>		CCNA (CISCO) CompTIA Network + CompTIA A+	HCC 12 Credits - NETW 150, NETW 131, NETW 132, NETW 160
<b>Digital Media/Graphics</b>		Adobe Illustrator Adobe Photoshop Adobe Premiere Pro Google	HCC 9 Credits – DMED 101, DMED 110, DMED 120
<b>Early Childhood Education</b>		Early Childhood Education - Level 1 (Illinois Gateway to Opportunity) CPR/1st aid	
<b>Emergency Medical Technician (EMT)</b>		*American Heart Association Health Care Provider BLS CPR *Eligible for IL Dept. of Public Health EMT Basic License Exam	1 Credit - EMT License
<b>Engineering &amp; Architectural Design</b>		Certiport Certified User: AutoCAD, Inventor, Revit	
<b>Fire Fighting</b>		*American Heart Association Health Care Provider BLS CPR	
<b>Medical Terminology &amp; Health Careers</b>		*American Heart Association Health Care Provider BLS CPR	HCC 3 Credits - HLTH 110
<b>Welding</b>	<b>Hobart Welding School:</b> 1. Base Metals & Filler Metals Class <b>Miller Welding School</b> 1. Intro to Welding Certificate 2. SMAW Class 3. GMAW Class 4. GTAW Class <b>Caterpillar Skills Certificate</b> 1. Precision Measurement 2. Metallurgy 3. Employability	OSHA 10 CPR/1st Aid	HCC 6 Credits - WELD 116, WELD 118 1 Credit - OSHA Certification
<b>Work Study</b>			HCC 3 Credits – SCED 105

**Dual Credit Courses are subject to change and are under the discretion of the Junior Colleges.**

**AUTOMOTIVE & DIESEL TECHNOLOGY I**

(828, 829)

Class Level: 11, 12

Credits: 2

Prerequisite: None

Automotive and Diesel Technology I incorporates the basic automotive, on-highway truck, agricultural equipment, construction equipment. This class is the stepping stone to what opportunities are available in this wide array of careers. We invite many businesses throughout Livingston County and the surrounding area to come in front of the students and speak about career opportunities and scholarships. We have several colleges that come as well to talk and explain what opportunities they can offer. The students will learn about safety, gasoline and diesel engine theory, basic electricity and diagnosis, and preventative maintenance in the first semester. Second semester students will learn transmissions and differentials, air conditioning, drivetrain, precision measuring, and suspension. Students will have an integration of mathematics, physics, chemistry, communication, reading, and teamwork as part of this class. Students will also get hands on learning with Lab Projects along with opportunities for self-developed projects they bring in. The students' expectations will include good attendance, work ethic, accountability, integrity, organization and teamwork.

**\*\*See list of Certifications on page 2 that students are able to obtain at the completion of this program.**

**AUTOMOTIVE & DIESEL TECHNOLOGY II**

(830, 831)

Class Level: 12

Credits: 2

Prerequisite: Automotive &amp; Diesel Technology I

Automotive and Diesel Technology II is an extension of the first-year class, which will help better prepare a student for an entry-level position in the industry or give them a head start for trade school or college. Outside resources are utilized as a part of this class which includes students participating in Internships at local businesses in the Livingston County area. Students will go more in-depth with problem solving skills for Electrical, Engines, Transmissions, Hydraulics and Air-Conditioning. Students will also focus on honing the LACC Core Professional Expectations to make them stand out in the workforce or in additional schooling. Lab activities include a challenging list of automotive repair items including engine rebuilding, electrical diagnosing, and air-conditioning diagnosis and repair. Second year students will also mentor and guide the first years to help them better understand the tasks at hand and will continue be leaders in the classroom as well as the lab.

**\*\*See list of Certifications on page 2 that students are able to obtain at the completion of this program.**

**CERTIFIED NURSE ASSISTANT**

(870, 871)

Class Level: 11, 12

Credits: 2

Prerequisite: None

The course is composed of a combination of subject matter and experiences designed to prepare students interested in the health career field and those interested in entering the workforce as a CNA. The student learns the competencies needed to perform as a nurse assistant under the direction of the registered nurse. The units of instruction should include the role of the nurse assistant while covering general health care topics: medical terminology; patients/clients and their environment; special feeding techniques; psychological support and, in long term and terminal illness, death and dying and all other basic nursing skills. Topics covered typically include normal growth and development; feeding, transporting patients, hygiene, and disease prevention; first aid and CPR; observing and reporting; care of equipment and supplies; doctor, nurse, and patient relationships and roles; procedure policies; medical and professional ethics; and care of various kinds of patients. This program is approved by Illinois Department of Public Health. Upon successful completion, the student is eligible to sit for the competency exam.

**\*\*See list of Certifications on page 2 that students are able to obtain at the completion of this program.**

**COMPUTER MAINTENANCE I**

(806, 807)

Class Level: 11, 12

Credits: 2

Prerequisite: None

This course is designed to provide students instruction in the areas of computer maintenance and repair. Students will be provided guided instruction to setup, configure, test, troubleshoot, and maintain personal computers and peripheral devices. Instruction includes assembling, maintaining, and upgrading personal computers. Students learn how to install, upgrade, and troubleshoot various hardware components such as motherboards, hard drives, CD-ROMS, RAM memory, power supplies, video cards, sound cards, and network cards. Students will have the opportunity to upgrade and install various versions of Microsoft Operating Systems. The course includes adding and removing software programs, installing and updating system drivers, creating a startup and recovery disk, and updating the BIOS and CMOS. Students learn to conduct preventive maintenance and perform system backups, data transfer, and recovery routines as well as use diagnostic utilities to troubleshoot hardware and software problems. Students also learn how to disassemble, clean, troubleshoot, and reassemble peripherals such as printers.

**\*\*See list of Certifications on page 2 that students are able to obtain at the completion of this program.**

**COMPUTER MAINTENANCE II**

Class Level: 12

Credits: 2

(808, 809)

Prerequisite: Computer Maintenance I

This course builds on the skills introduced in Computer Maintenance I. Students learn how to connect and install multiple computers and peripherals together to create a computer network. Students build, configure, and maintain network servers along with installing and configuring various Microsoft network operating systems. Students also learn to use troubleshooting services, system monitoring utilities, and data backup and recovery systems. Other topics include learning how to connect various network components such as servers, computers, and printers together using data cabling, hubs, and switches, while also learning to run, terminate, and troubleshoot data cabling. In addition, students learn how to install and upgrade software across the network, as well as map drives and share resources such as printers, software, and files. The course includes setting up and configuring various network services such as TCP/IP, DHCP, DNS, VPN, terminal services, e-mail, and web services. Students learn how to secure and protect network servers and data as well as setting up and configuring a firewall, intrusion detection system, and encryption software for identifying and preventing potential network attacks. Internships with area businesses are available through this program.

**\*\*See list of Certifications on page 2 that students are able to obtain at the completion of this program.**

**CONSTRUCTION TRADES I**

Class Level: 11, 12

Credits: 2

(800, 801)

Prerequisite: None

This course gives beginning students the opportunity to develop knowledge and skills in the use of basic hand tools, power tools, materials, processes, safety standards, and other items associated with construction. This course provides experiences related to the erection, installation, and maintenance of residential buildings and related fixtures. Planned learning activities allow students to understand fundamental principles and methods, and develop technical skills related to masonry, carpentry, and finish work. Instruction includes safety principles and practices, recognition of standard lumber sizes, foundation layout methods, building concepts and procedures, local and state codes, cost estimating, and blueprint reading. Students work on the Construction Trades job and will gain hands on experience each day on the job site.

**\*\*See list of Certifications on page 2 that students are able to obtain at the completion of this program.**

**CONSTRUCTION TRADES II**

Class Level: 12

Credits: 2

(802, 803)

Prerequisite: Construction Trades I

This course provides learning experiences related to the erection, installation, maintenance, and repair of building structures and related utilities. Students technical skill experiences include instruction and activities in safety principles and practices, installing switch/outlet boxes, light fixtures, roughing in and trimming out electrical devices and appliances, preparing foundations and footings, constructing residential chimneys and fireplaces, installing interior/exterior doors, working with trim of casing/baseboard, setting cabinets, flooring (tile, hardwood, and laminate), painting drywall, while following advanced building and construction methods and codes. Students will also work with siding, both soffit and fascia, and shingles while on the job site. All learning experiences are designed to allow the student to acquire job-entry skills and knowledge, honing their skills for employability. These students will be more experienced and will have more expectations placed upon them and will develop leadership skills as a potential foreman or a crew leader on Construction Trades projects.

**\*\*See list of Certifications on page 2 that students are able to obtain at the completion of this program.**

**CRIMINAL JUSTICE I**

Class Level: 11, 12

Credits: 2

(872, 873)

Prerequisite: None

Criminal Justice I is designed to prepare students for an exciting career in the field of criminal justice. Students are introduced to the history of the criminal justice system and the advancements in these ever-changing fields. Instruction includes the study of case law, legal rights, and examination of routine police, court, and corrections procedures. Students will have the opportunity to meet local, state, and federal professionals in the field, participate in simulated scenarios and demonstrations, and tour pertinent criminal justice sites. This course is a must have for those interested in the world of criminal justice. Opportunities include security at various local events.

**\*\*See list of Certifications on page 2 that students are able to obtain at the completion of this program.**

**CRIMINAL JUSTICE II**

Class Level: 12

Credits: 2

(874, 875)

Prerequisite: Criminal Justice I

Criminal Justice II is designed for those who have successfully completed Criminal Justice I to continue their exploration of the field of criminal justice. Students participate in an extended campus internship experience with many local criminal justice agencies including careers in police work, telecommunications, courts, corrections, and private security. Students will research infamous killers and illicit drugs and present on their findings. Students will learn the 10-codes, the phonic

alphabet, and the many forms police officers use on a regular basis. Students will conduct simulated traffic stops and will investigate crime scenarios. Students are educated on Drone Search & Rescue laws and techniques. Local, state, and federal professionals in the field are brought in to share their insights and expertise bringing the real world to our classroom. Field trips cap off the experience to give each student a well-rounded perspective of the criminal justice system. Opportunities include SkillsUSA competition, internships, and security at various local events.

**\*\*See list of Certifications on page 2 that students are able to obtain at the completion of this program.**

### **CULINARY ARTS I**

Class Level: 11, 12

Credits: 2

(890, 891)

Prerequisite: None

Culinary Arts I is an introduction to the food industry following the National Restaurant Association textbooks that prepares students for a career in restaurant, hospitality, and foodservice management. The focus is on classical French cooking, pastry, and knife skill techniques. LACC is a licensed Kitchen and Catering Service through the Livingston County Health Department that teaches proper care and use of commercial equipment, food preparation, customer service, and nutrition. While gaining hands on experience, the students learn to work as a team, plan menus, manage expenses, and utilize culinary math. Within the first few weeks of class, students take their Illinois Food Handlers test; upon passing it, they immediately improve their chances at being hired in a restaurant setting because they have established that they know the importance of safe food handling and a clean, safe working environment. Upon successful completion of the class, students will have the opportunity to earn the ServSafe Manager and ServSafe Food Allergens.

**\*\*See list of Certifications on page 2 that students are able to obtain at the completion of this program.**

### **CULINARY ARTS II**

Class Level: 12

Credits: 2

(892, 893)

Prerequisite: Culinary Arts I

Culinary Arts II emphasizes students developing management skills while increasing the skills attained in Culinary I and developing more complex cooking, pastry, and management techniques. Students will receive opportunities to put their new skills in action by being assigned as a Sous Chef under the supervision of Chef Rowan at LACC Catering events. Culinary II students will also learn inventory and beverage management, advertising, writing schedules and standardized recipes. Employability skills such as time management, effective communication, team work and collaboration, professionalism and a strong work ethic, will be emphasized throughout the two-year sequence. The ServSafe certificates and the Food Handlers certificate enable the student to be immediately ready for an industry job in any professional restaurant setting. Students will have the opportunity to compete in culinary and baking competitions through SkillsUSA and opportunities for internships.

**\*\*See list of Certifications on page 2 that students are able to obtain at the completion of this program.**

### **CYBER SECURITY/NETWORKING I**

Class Level: 11, 12

Credits: 2

(810, 811)

Prerequisite: None

Cyber Security/Networking I is a skill-level course designed to provide students with the skills needed to setup, configure, test, troubleshoot, maintain, and administer a data network utilizing Cisco Systems Hardware and Internet Operating Systems. Instruction will include network planning decisions, such as choosing an appropriate network configuration, determining the performance level requirements considering the differences among operating systems, and recommending network interface cards and cabling. Students will also learn how to setup and manage file systems and resources, and network topologies, protocols, and system utilities to efficiently run software applications on a network. Students will learn to use basic operating system commands, install and configure networks, set up user accounts and rights, and establish user security and permissions.

**\*\*See list of Certifications on page 2 that students are able to obtain at the completion of this program.**

### **CYBER SECURITY/NETWORKING II**

Class Level: 12

Credits: 2

(812, 813)

Prerequisite: Cyber Security/Networking I

Computer Networking II is a skill-level course for students who have completed Computer Networking I. Students will continue to learn skills to set up, configure, test, troubleshoot, maintain, and administer a data network utilizing Cisco Systems Hardware and Internet Operating Systems. Students will learn to use troubleshooting services, system monitoring utilities, data backup and recovery systems. Instruction will include setting up and configuring various network services such as TCP/IP, DHCP, DNS, VPN, terminal services, e-mail, content filtering, and web services. Students will learn techniques to secure and protect network servers and data. Students will be introduced to some basic concepts regarding web server configuration. Students will also learn to use standard software tools to determine system

vulnerabilities and correct these vulnerabilities by reconfiguring the operating system. Students will diagnose network problems using public domain network sniffers such as Wireshark. Instruction will include setting up and configuring a firewall, intrusion detection system, and encryption software for identifying and preventing potential network attacks. Students in good standing will have the opportunity for internships at area businesses.

**\*\*See list of Certifications on page 2 that students are able to obtain at the completion of this program.**

### **DIGITAL MEDIA/GRAPHICS I**

(856, 857)

Class Level: 11, 12

Credits: 2

Prerequisite: None

This course is designed to provide students with the skills needed for a career in the fields of advertising, commercial art, graphic design, website development, and graphic illustrations. Students learn to apply artistic design and layout principles along with text, graphics, drawing, rendering, sound, video, and 2D/3D animation integration to develop various print, video, and digital products. Students use hardware and software programs like Adobe Illustrator, Photoshop, Premiere Pro, and others to create, manipulate, color, paint, and layer scanned images, computer graphics, and original artwork. Students will use hardware and software to capture, edit, create, and compress audio and video clips. They will apply artistic techniques to design and create advertisements, displays, publications, marketing brochures, logos, trademarks, packaging, video graphics, and computer-generated media. Students will work in a project-based environment to create a variety of interactive online products. Instruction includes client interviewing skills, product proposal development, product presentation techniques, and how to create a product portfolio. Digital Media/Graphics is a two-year program, although students can take one year.

**\*\*See list of Certifications on page 2 that students are able to obtain at the completion of this program.**

### **DIGITAL MEDIA/GRAPHICS II**

(858,859)

Class Level: 11, 12

Credits: 2

Prerequisite: Digital Media/Graphics I

This course will continue to build upon the concepts and skills learned in Digital Media/Graphics I. Students will work in a more project-based environment to create a variety of different digital images, printed products & videos. Students will learn about creating and manipulating copy in a digital piece of art and what types of text are appropriate for different designs. Instruction will dive deeper into the use of Canon cameras and camcorders to capture images and videos and how to get the most from those types of media. Advanced technology and color printers are readily available for students to learn and produce on. Students will practice working with clients & presenting proposals to a group of their peers. This course will also focus on interviewing for a potential design career and creating a product portfolio.

**\*\*See list of Certifications on page 2 that students are able to obtain at the completion of this program.**

### **EARLY CHILDHOOD EDUCATION I**

(880, 881)

Class Level: 11, 12

Credits: 2

Prerequisite: None

This course is designed to introduce students to career paths in education and early childhood programs and services. The foundations of this program are to prepare students for teaching in any capacity, as well as careers that relate to having a strong knowledge base in child development and human services. Curriculum styles and observation methods are introduced and practiced. Students prepare for operation of a lab preschool. Career interests and opportunities are covered. Students prepare a professional portfolio including resume, cover letter, lesson plan samples, and class work. Students earn a Level I Early Childhood Education Credentials through Gateways to Opportunity.

**\*\*See list of Certifications on page 2 that students are able to obtain at the completion of this program.**

### **EARLY CHILDHOOD EDUCATION II**

(882, 883)

Class Level: 12

Credits: 2

Prerequisite: ECE I

This course is a continuation of Early Childhood Education I. Emphasis is placed on the management aspects of the lab preschool as well as other early childhood program types. Students explore topics including educational philosophies, program quality, licensing and accreditation, budgeting, staffing, inventory management, and public relations. Students continue the development of their professional portfolio. Students in good standing will be given the opportunity to intern at local early childhood sites.

**\*\*See list of Certifications on page 2 that students are able to obtain at the completion of this program.**

**EMERGENCY MEDICAL TECHNICIAN**

(864, 865)

Class Level: 11, 12

Credits: 2

Prerequisite: None

The EMT-Basic course is a cooperative joint venture between OSF Saint James Medical Center and LACC and will be taught in accordance with the EMT-Basic National Standard Curriculum, and includes a minimum of 120 hours core didactic (classroom) hours and 20 ED non-classroom clinical hours. Classes will be comprised of lectures, demonstrations, and practical given by the instructors approved by the Illinois Department of Public Health and the Emergency Medical Services System. At successful completion of the course, the students will have the opportunity to take the state of Illinois written exam and be licensed as an EMT-Basic.

**\*\*See list of Certifications on page 2 that students are able to obtain at the completion of this program.**

**ENGINEERING AND ARCHITECTURAL DESIGN I**

(814, 815)

Class Level: 11, 12

Credits: 2

Prerequisite: None

This course is designed for students who are interested in exploring careers in engineering and architecture. By utilizing programs such as Autodesk AutoCAD and Inventor, students will learn how to apply the software to make projects using 3D printers and CNC machines. Some of the projects on the CNC and 3D printer may include: 3D LED lamps, bridges, miniature model cars, and 3D plastic model designs. In the second semester, students will create residential architecture using drafting techniques and the industry leading program Revit, which creates floor plans, section views, elevations, and realistic representations of their houses similar to what is seen on *HGTV* renderings. Throughout the year, students have the opportunity to gain certification in AutoCAD, Inventor, and Revit, attend competitions, field trips, and participate in problem-solving activities. Students can earn up to 6 college credits.

**\*\*See list of Certifications on page 2 that students are able to obtain at the completion of this program.**

**ENGINEERING AND ARCHITECTURAL DESIGN II**

(816, 817)

Class Level: 12

Credits: 2

Prerequisite: Eng/Arch Design I

Students in this course learn how to use the 3D modeling program *Inventor* to apply core principles of Science, Technology, Engineering and Mathematics (STEM). Students will also make many projects using the CNC machine and 3D printer. Each project consists of applying problem solving skills to create inventions and innovations to prototypes in order to solve problems. In the second semester, students build on their architectural knowledge by studying structural commercial design process while developing Building Information Models that could be used to design their own building. Similar to Engineering and Architectural Design I, students will have an opportunity to earn certifications in *Inventor* and *Revit*, attend competitions, field trips, and participate in problem-solving activities. Students can earn up to 3 college credits.

**\*\*See list of Certifications on page 2 that students are able to obtain at the completion of this program.**

**FIRE-FIGHTING I**

(860, 861)

Class Level: 11, 12

Credits: 2

Prerequisite: None

This course is designed to provide the student with information in the history, traditions, terminology, organization, and roles and operation of the fire service. In addition, the class covers principles of combustion and building construction characteristics. The class also contains typical job and operational functions that should provide insight into the inner workings of the fire service. Students will gain valuable, hands-on experience training and working with professional firefighters at the fire station.

**\*\*See list of Certifications on page 2 that students are able to obtain at the completion of this program.**

**FIRE-FIGHTING II**

(862, 863)

Class Level: 12

Credits: 2

Prerequisite: Fire-Fighting I

This course is designed to provide the student with the information needed in transitioning from firefighter level tasks into a supervisory role as a company officer. In addition, the class will cover basic principles in leadership, supervision, management, and instructing the Fire-Fighting I students during company drills. Continued experience in skill building, teamwork, and safety are critical for success in this career field. The class will also contain typical administrative duties in addition to the daily emergency operations that a company officer may encounter while working in the fire service. Students will be given the opportunity to compete in SkillsUSA against other fire science students in Illinois.

**\*\*See list of Certifications on page 2 that students are able to obtain at the completion of this program.**

**MEDICAL TERMINOLOGY AND HEALTH CAREERS**

Class Level: 11, 12

Credits: 2

(866, 867)

Prerequisite: None

This is a year-long course that will provide a solid foundation of Medical Terminology and relate that terminology to various health related careers. Emphasis will be placed on correct spelling, pronunciation and abbreviation use. Combining prefixes, roots, and suffixes to form appropriate terminology and relate that terminology to body structure and function, disease and disorder processes, and medical/surgical procedures will be the structure of the course. The course is focused on providing the student with a basic working knowledge of medical terms and applying those terms to a variety of health-related careers. Students will also explore many related career opportunities in health-related fields. Clinical experience and job shadowing will be offered as part of the course.

**\*\*See list of Certifications on page 2 that students are able to obtain at the completion of this program.**

**WELDING TECHNOLOGY I**

Class Level: 11, 12

Credits: 2

(850, 851)

Prerequisite: None

The Welding Technology I program prepares students for entry level welder positions. Students will gain the knowledge and develop the basic fundamental skills needed to be successful in a welding career. A focus is placed on OSHA safety training with students obtaining their OSHA 10 certification. Units of instruction include SMAW and GMAW welding with the start of skill development in various types of welding including flat, horizontal, vertical, overhead, and circular techniques. Students will also learn metallurgy, cutting metal using plasma and oxy-fuel equipment. In addition, students learn the basics of reading welding symbols on blueprints, basic metallurgy, identification of metals and electrodes, theory of welding processes, joint design and configuration, welding positions, and math including use of formulas, geometry, and conversions, precision measuring, applied reading, material layout, and production process planning.

**\*\*See list of Certifications on page 2 that students are able to obtain at the completion of this program.**

**WELDING TECHNOLOGY II**

Class Level: 12

Credits: 2

(852, 853)

Prerequisite: Welding Technology I

This course builds on the skills and concepts introduced in Welding I and provides more in-depth skill development in various types of welding including horizontal, vertical, overhead, and circular techniques. Students will start to focus on GTAW and welding using exotic metals such as aluminum and stainless steel, while creating and gaining a better understanding of quality control. Instructional activities may include working on school and client projects to expose students to real world situations and student internships may be available at area businesses. Students will also explore the use of robotic and automated production welding through fieldtrips and guest speakers. OSHA standards and guidelines endorsed by American Welding Society (AWS) are used to enforce safety at all times.

**\*\*See list of Certifications on page 2 that students are able to obtain at the completion of this program.**

**Work Study**

Class Level: 12

Credits: 3

(920, 921)

Prerequisite: Senior status

This course is designed to help connect the skills and concepts taught and discussed between school and the world of work. The course includes making decisions about the work place, career planning, entering the work force, the individual as a worker, and making financial decisions. Students also study professionalism, different types of training, completing job resumes, applying for jobs, working with others, using credit, buying insurance, and analyzing housing options. The purpose of this course is twofold; students are provided practical work experience while still in high school and gain practical experience navigating the working world and independent living. This work experience provides on-the-job training in the career area of the student's choice. The students will take regularly scheduled classes part of the day and a work experience the other part of the day totaling a minimum of 12 hours per week. Students must apply through the LACC and will be interviewed.

**\*\*See list of Certifications on page 2 that students are able to obtain at the completion of this program.**