

## Aesthetician (One year)

The Aesthetician program prepares students for a career as trained skin care professionals who specialize in providing skin care and beauty-related services. Courses include integrated clinical experiences. In partnership with Gateway Community College, courses meet three and one-half hours per day, Monday through Friday. This program is located at Gateway Community College at Deer Valley, 2931 W. Bell Road, Phoenix, AZ 85023.

### **AE101 - Aesthetician Foundations**

**2.25 High School Credits**

AE101 is the first course of the one-year Aesthetician program, offered to high school juniors and seniors. The course provides students a foundation in the skin care and beauty-related industry. Students will learn to perform facials, skin analysis, and body treatments, including full body exfoliation. Students will also learn hair removal techniques using both hard and soft wax, light exfoliation with fruit acids (peels), and microdermabrasion. Training includes day and evening makeup and false eyelash application.

### **AE102 - Aesthetician Services**

**2.25 High School Credits**

*Prerequisite(s): AE101 Aesthetician Foundations*

AE102 is the second course of the one-year program. The course allows students to apply learned skills in skin care and beauty-related services. Emphasis is placed on the application of skills necessary for establishing and maintaining a clientele. Topics also include knowledge of State laws pertaining to aesthetics, as well as business management skills. Upon completion of this program you will be prepared to pass the Arizona State Board of Cosmetology aesthetics licensing exam.

## Air Conditioning Technician (One year)

The Air Conditioning Technician program prepares students to work as a technician in heating, ventilation, air conditioning and refrigeration. Students will trouble shoot, diagnose, repair and install equipment in the commercial and residential market. Courses meet three hours per day, Monday through Friday. This program is located at West-MEC Northeast Campus, 1617 W. Williams Drive, Phoenix, AZ 85027.

### **ARC103 - HVAC-R Fundamentals**

**2 High School Credits**

This is the first course in a series of two. The course will cover the following topics: Construction drawings, basic electricity tools of the trade, piping, HVAC controls, math for HVAC, estimating skills, materials handling, safety, rigging, introduction to cooling and heating, soldering and brazing.

### **ARC104 - HVAC-R Technician**

**2 High School Credits**

*Prerequisite(s): ARC103 - HVAC-R Fundamentals*

This is the final course in a series of two. The course will cover the following: commercial air systems, chimneys, flues, hydronic systems, air quality, leak detection, recovery and charging, basic electronics, control circuit troubleshooting, troubleshooting gas heating and cooling, heat pumps, basic installation and maintenance practices and duct systems.

## Automotive Collision Technology (Two years)

The Automotive Collision Technology program focuses on auto body repair. Courses meet two and one-half hours per day, Monday through Friday. This program is located at West-MEC Northeast Campus, 1617 W. Williams Drive, Phoenix, AZ 85027.

### **AC101 - Automotive Collision Core Curriculum**

**1.5 High School Credits**

AC101 is the first course of a two-year Automotive Collision Technology program offered to junior and senior students. This course teaches the basic principles and terminology of the auto body repair industry. This course includes hands-on repair of body damage including: metal work, trim and basic painting, estimating job costs, types of metals and plastic, industry safety components, structural analysis, suspension and drive trains, computer diagnostic systems, and welding used in collision repair. Upon completion of the two-year program, students may test for I-Car Industry Certification.

### **AC102 - Automotive Collision Repair**

**1.5 High School Credits**

*Prerequisite(s): AC101 - Automotive Collision Core Curriculum*

AC102 is the second course of a two-year Automotive Collision Technology program offered to junior and senior students. This course covers auto refinishing and minor bodywork. Students will learn advanced principles of auto body painting and refinishing including: surface preparation, spray gun operation, paint mixing, matching and applying, solving paint application problems, finish defect causes and cures, and safety precautions. Students will use all types of automotive paints and undercoats; some custom design paintwork is taught. This course also teaches estimating costs, types of metals and plastics used for reconstruction, safety practices, advanced structural analysis, computer diagnostic systems, welding, as well as customer service and basic business practices. Upon completion of the two-year program, students may test for I-Car Industry Certification.

### **AC201 - Automotive Collision Structural Repair**

**1.5 High School Credits**

*Prerequisite: AC102 - Automotive Collision Repair*

This course starts the second year of the two-year Automotive Collision Technology program which continues to cover principles and terminology of the auto body repair industry. The curriculum reiterates safety, career opportunities, workplace skills and ethics, and includes more advanced principles of structural damage analysis including major body and frame repair, mechanical and electrical repair, suspension and drive trains, computer diagnostic systems, estimating cost factors and glass repair. Upon completion of the two-year program, students may test for I-Car Industry Certification.

### **AC202 - Automotive Collision Advanced Painting Techniques**

**1.5 High School Credits**

*Prerequisite: AC201 - Automotive Collision Structural Repair*

This is the final course in the two-year Automotive Collision Technology program. The course allows students to apply learned skills in the area of collision repair with extensive hands-on custom painting and tinting, matching paints, fancy detailing and troubleshooting painting problems. Upon completion of the two-year program, students may test for I-Car Industry Certification.



## Automotive Technology (Two years)

The goal of the Automotive Technology program is to provide experience in the Automotive Service Technology field and prepare students to be successful in the industry. Courses meet two and one-half hours per day, Monday through Friday. This program is located at West-MEC Northeast Campus, 1617 W. Williams Drive, Phoenix, AZ 85027.

### **AT101 - Automotive Technologies Core Curriculum**

**1.5 High School Credits**

AT101 is the first course in a two-year Automotive Technology program, offered to junior students through a partnership with West-MEC (Western Maricopa Education Center). The course focuses student learning on automobile engine performance, brakes, steering and suspension, and electrical components.

### **AT102 - Automotive Technologies I**

**1.5 High School Credits**

*Prerequisite(s): AT101 - Automotive Technology Core Curriculum*

AT102 is the second course in the Automotive Technology program. The course allows students to apply learned skills in the area of automobile engine performance, brakes, steering and suspension, and electrical components.

### **AT201 - Automotive Technologies II**

**1.5 High School Credits**

*Prerequisite(s): AT102 - Completed first year of Automotive Technology*

AT201 starts the second year of the two-year Automotive Technology program. The program teaches students automobile engine performance, brakes, steering and suspension, and electrical components.

### **AT202 - Automotive Technologies Advanced Systems**

**1.5 High School Credits**

*Prerequisite(s): AT201 - Automotive Technologies II*

AT202 is the final course in the Automotive Technology program. The course allows students to apply learned skills in the area of automobile engine performance, brakes, steering and suspension, and electrical components.

❖ Upon completion of the two-year program, students may take the NATEF ASE Certification Exam.



## Aviation Maintenance Technology (Two years)

The Aviation Maintenance Technology program includes approximately 17 days each June to meet the minimum hours of required FAA instruction. Courses meet four and one-half hours per day, Monday through Friday. This program is located at West-MEC Central Campus, 6997 N. Glen Harbor Blvd. , Glendale, AZ 85307.

### **AV101 - Aviation Technologies General Curriculum**

**3 High School Credits**

AV101 is the first course of a two-year Aviation Maintenance Technology program, offered to junior students. The program curriculum includes content in the repair and maintenance of aircraft including the following: electricity, math, physics, mechanic privileges and limitations, maintenance publication, maintenance forms and records, weight and balance.

### **AV102 - Aviation Airframe Systems I**

**2 High School Credits**

*Prerequisite(s): AV101 - Aviation Technologies General Curriculum*

AV102 completes the first year of the Aviation Maintenance Technology program. Students are introduced to fundamental skills in aircraft repair and maintenance including: aircraft instruments, aircraft fuel systems, fire protection systems, ice and rain control systems, aircraft finishes, sheet metal, landing gears, and hydraulics.

### **AV103 - Aviation Airframe Systems Summer**

**1 High School Credit**

*Prerequisite(s): AV102 - Aviation Airframe Systems I*

### **AV201 - Aviation Airframe Systems II**

**3 High School Credits**

*Prerequisite(s): AV103 - Aviation Airframe Systems Summer*

AV201 starts the second year of the Aviation Maintenance Technology program. The program curriculum includes content in the repair and maintenance of aircraft including the following: Welding, Cabin Atmosphere Control Systems, Airframe Inspection, and Assembly and Rigging.

### **AV202 - Aviation Powerplant**

**2 High School Credits**

*Prerequisite(s): AV201 - Aviation Airframe Systems II*

AV202 is the final course of the Aviation Maintenance Technology program. The program curriculum includes content in the repair and maintenance of aircraft including the following: Turbine and Reciprocating Engines, Engine Inspection, Ignition and Starting Systems, and Fuel Metering Systems.

### **AV203 - Aviation Powerplant Summer**

**1 High School Credit**

*Prerequisite(s): AV202 - Aviation Powerplant*

- ❖ Upon successful completion of the two-year program, students who are 18 years of age or older, may take the final exam for certification known as the Aviation Maintenance Technician exam.



## **Avionics/Electronics (Two years)**

The Avionics/Electronics program prepares students to work in the aviation avionics industry and in organizations that have a heavy emphasis on electronics and electronic systems. This course will cover areas of aviation fundamentals, electronics, safety, math and science for avionics, instrumentation, exposure to airframes and cockpits, lab testing, installation and repair of aviation electronic equipment. Courses meet two and one-half hours per day, Monday through Friday. This program is located at West-MEC Central Campus - Building B, 6997 N. Glen Harbor Blvd. , Glendale, AZ 85307.

### **ET101 - Avionics Technologies Fundamentals I**

**1.5 High School Credits**

This is the first course in a series of four. The course will cover the following areas: aviation fundamentals, basic electricity/electronics, safety, ac/dc theory, semi-conductors, instrumentation, tools of the trade and math and science for avionics.

### **ET102 - Avionics Technologies Fundamentals II**

**1.5 High School Credits**

*Prerequisite(s): ET101 - Avionics Technologies Fundamentals I*

This is the second course in a series of four. This course will provide a base foundation in the following areas: electronic circuits, digital circuits, numbering systems in electronics, air transportation code, aircraft wiring, troubleshooting and repair and line and bench radar systems.

### **ET201 - Avionics Technologies Services I**

**1.5 High School Credits**

*Prerequisite(s): ET102 - Avionics Technologies Fundamentals II*

This is the third course in a series of four. This course applies learned skills from the fundamental courses to the following: aircraft electrical systems, line and bench maintenance, aircraft radio maintenance, calibration of test equipment, soldering and lab safety.

### **ET202 - Avionics Technologies Services II**

**1.5 High School Credits**

*Prerequisite(s): ET201 - Avionics Technologies Services I*

This is the final course in the series of four. The course includes the application of skills learned in the first three courses. The emphasis in this course is on installing and testing avionics systems such as transceivers, receivers, flight and engine instrumentation, auto pilot systems, navigation and radar systems, flight recording systems, FCC license requirements and aircraft forms and documentation.

## Coding (Two years)

The Coding program prepares students for a career as a software developer. The program prepares students to design and develop software, build apps for phones, tablets, and websites and write and test computer code. Courses meet two and one-half hours per day, Monday through Friday. This program is located at START@West-MEC, 5405 N. 99th Avenue, Glendale, AZ 85305.

### **C101 - Survey of Coding**

**1.5 High School Credits**

C101 is the first course of the two-year Coding program, offered to high school juniors and seniors. The course provides students a foundation in the software development industry. Students will learn the fundamentals of software development systems, computer concepts, and programming techniques. Hands-on experience with selected industry software and programming languages such as: PHPStorm, Git and GitHub, HTML5 and CSS3, JavaScript, and PHP. Students will apply skills and knowledge to develop web-based applications.

### **C102 - Coding Fundamentals I**

**1.5 High School Credits**

*Prerequisite(s): C101 – Survey of Coding*

C102 is the second course of the two-year Coding program. Students will learn fundamental concepts of programming from an object-oriented perspective. These concepts include: classes, objects and methods, algorithm development, problem-solving techniques, control structures, data types and structures, and debugging methods. This course also covers relational database design and setup. Students will apply skills and knowledge to develop more complex web-based applications with emphasis on data collection, code management, and data persistence.

### **C201 - Coding Fundamentals II**

**1.5 High School Credits**

*Prerequisite(s): C102 – Coding Fundamentals I*

C201 is the third course of the two-year Coding program. Students will learn advanced programming, integration, and team-oriented programming. Emphasis is on the emerging NodeJS development stack covering topics such as: server-side JavaScript, APIs and 3rd party integration, module/package development and publishing. This course also covers document-based (NoSQL) database design and development. Students will apply skills and knowledge to develop NodeJS APIs ready for front-end service consumption.

### **C202 - Coding Applications**

**1.5 High School Credits**

*Prerequisite(s): C201 – Coding Fundamentals II*

C202 is the fourth course of the two-year Coding program. The course allows students to apply learned skills in software development to create robust services and applications. Emphasis remains on full-stack JavaScript development. Students will build on the skills and knowledge acquired in the previous courses with an emphasis on: AngularJS and single page applications, mobile device service consumption, and cloud deployment of developed applications.

## Cosmetology (Two years)

The Cosmetology program includes approximately 12 days each June in order to complete the required training hours. Also in partnership with Gateway Community College, courses meet four hours per day, Monday through Friday. This program is located at West-MEC Northwest Campus, 13201 W. Grand Avenue, Surprise, AZ 85374 and Gateway Community College at Deer Valley, 2931 W. Bell Road, Phoenix, AZ 85023.

### **COS101 - Fundamentals of Cosmetology**

**3 High School Credits**

This fundamentals course provides junior and senior students with the knowledge needed to succeed in a Cosmetology and Aesthetics program. Topics include ethics, sanitation, Arizona state laws, and other fundamentals of the modern salon. As students begin training, they will explore the history of cosmetology, gain an understanding of the industry's expectations for image, communication, sanitation, and general life skills. Students will identify basic anatomy and physiology structures, including skin, nails, muscles, bones, hair, and scalp. Students will be introduced to cosmetology-related chemistry and electricity, practice basic shampooing and scalp treatments, hair cutting, nail care, basic aesthetic procedures, disinfection control practices, and styling techniques, including blow drying, finger waving, air waving, hair pressing, and thermal waving and curling. Students will begin to work with hair color, tint, and bleach, along with permanent waving and chemical relaxing processes. Practice will be limited to mannequins, other students, or models.

### **COS102 - Cosmetology Basic Applications**

**2.5 High School Credits**

*Prerequisite(s): COS101 - Fundamentals of Cosmetology*

Building on the skills and knowledge acquired in the previous course, students will apply chemical texture services, wig and hair enhancements, braids, extensions, permanent waving, hair relaxing, tinting, bleaching, and basic hair coloring procedures. Students will recognize various skin diseases and disorders, along with the theory of aesthetics, which includes knowledge of facial procedures including make-up application and waxing. Additionally, students will be introduced to nail diseases and disorders. Students will gain knowledge of manicure and pedicure practices and procedures, along with gaining experience with sculptured nails, gel nails, and nail tips with overlays. Students will continue practicing their skills on mannequins, students, models, and students will be introduced to working on clients.

### **COS103 - Cosmetology Basic Applications Summer**

**0.5 High School Credits**

*Prerequisite(s): COS102 - Cosmetology Basic Applications*

### **COS201 - Cosmetology Advanced Applications**

**3 High School Credits**

*Prerequisite(s): Completed first year of Cosmetology*

As students progress through this class, they will continue to develop and practice skills in hair cutting, coloring, bleaching, tinting, permanent waving, and styling on the clinic floor, working with clients. Students will be encouraged to develop good customer service skills and build a client base. In addition, students will continue to practice and cultivate their aesthetic and nail care skills and knowledge.





**COS202 - Practicum & Certification Prep****2.5 High School Credits***Prerequisite(s): COS201 - Cosmetology Advanced Applications*

Students will apply the knowledge and skills learned in previous classes and working on clients, on the clinic floor. At this time in the training, students will gain expertise in their skills and receive additional training for advanced techniques in hair cutting, coloring, permanent waving, relaxing, and styling. In addition, students will sharpen their skills in aesthetics, nail care, and client services. Students will begin to explore cosmetology careers and salon businesses. This course prepares students for licensure and entrance into the workforce. Students will review the Arizona Board of Cosmetology (ABOC) rules and regulations, along with cosmetology-related Arizona State Laws. In preparation for the state board exam, students will fine tune procedures and review the ABOC required curriculum. Students will participate in mock exams – both written and demonstration. In addition, students will begin employment-seeking activities, which include job site field trips, résumé writing, mock interviewing, and job researching.

**COS203 - Practicum & Certification Prep Summer****0.5 High School Credits***Prerequisite(s): COS202 - Practicum & Certification Prep*

## **Electrical Trade Specialty (One year)**

The Electrical Trade Specialty program prepares trainees to enter the electrical field. This course will cover the basic fundamentals of the following: construction math, power & hand tools, basic rigging, material handling, communication skills, and employability skills, electrical circuits, device boxes and equipment, raceways and fittings, conductors and cables, motors, lighting, pull and junction boxes, breakers and fuses, safety, construction drawings and control systems. Courses meet two and one-half hours per day, Monday through Friday. This program is located at West-MEC Northeast Campus, 1617 W. Williams Drive, Phoenix, AZ 85027.

### **ELE101 - Industrial Electrician Fundamentals**

**1.5 High School Credits**

This is the first in a series of two courses. This foundation course will cover the core curriculum of safety, construction math, power & hand tools, basic rigging, material handling, communication skills, and employability skills. The students will learn about electrical circuits, National Electric Code®, Device boxes, conduit bending, construction drawings, raceways, fittings, conductors, cables, residential electric services, and test equipment. The student will develop skills in oral and written communication as they relate to the electrical industry. This course is designed to help students develop an enhanced understanding of teamwork, employability skills, and career opportunities in the electrical field.

### **ELE102 - Industrial Electrician**

**1.5 High School Credits**

*Prerequisite(s): ELE101 Industrial Electrician Fundamentals*

This is the second course in a series of two. This course prepares the individual to apply and demonstrate advanced technical knowledge and skills using a variety of techniques and equipment. This course includes a focus on alternating current, motors, lighting, conduit bending, pull boxes, junction boxes, conductor installation, cable tray, terminating and splicing conductors, fuses, circuit breakers, and control systems. Students will also plan, design, and complete project-based activities.

## Emergency Medical Technician (One Semester)

The Emergency Medical Technician (EMT) program meets at various campuses. Community College Credits are awarded when courses are successfully completed. In partnership with Maricopa Community Colleges, courses meet three hours per day, Monday through Thursday. This program is located at Southwest Skill Center, 3000 N. Dysart Road, Avondale, AZ 85392 and Gateway Community College at Deer Valley, 2931 W. Bell Road, Phoenix, AZ 85023.

### **EM101A - Fundamentals of EMT**

**1 High School Credit**

EM101A is offered to senior students through a partnership with West-MEC (Western Maricopa Education Center). The CPR section of the EMT course is a comprehensive overview to train a student to provide emergency care for patients suffering sudden illness or injury and includes patient assessment, lifting/moving patients, taking vital signs, basic treatment for selected medical conditions and bandaging / splinting of injured patients. This course is appropriate for students considering careers in law enforcement agencies, healthcare, or fire service/protective agencies.

### **EM101B - Advanced Applications of EMT**

**1 High School Credit**

*Prerequisite(s): EM101A Fundamentals of EMT*

EM101B, the second section of the EMT course presents techniques of emergency medical care in accordance with national and state curriculum. The class encompasses the study of the human body, patient assessment, treatment of medically or traumatically compromised patients, special hazards, and medical operations. Further topics include IV monitoring, Sudden Infant Death Syndrome (SIDS), patient-assisted medication administration, automated external defibrillators, and blood-glucose monitoring. Students participate in two eight-hour clinical rotations through a local emergency department scheduled during the semester outside normal class hours.

- ❖ Upon completion of the course, students who are 18 years of age or older, may take the National Registry Exam to receive EMT certification.



Entrance requirements for West-MEC Central Programs can be found at: <http://www.west-mec.org/>

Elective high school credits awarded each semester.

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## Energy & Industrial Technology (Two years)

The Energy & Industrial Technology program is a multidisciplinary field of study that includes a combination of mechanical engineering, electrical engineering, automation and control systems engineering. In close partnership with Arizona Public Service, Palo Verde Generating Station and Estrella Mountain Community College, courses meet two and one-half hours per day, Monday through Friday. This program is located at West-MEC Southwest Campus, 500 N. Verrado Way, Buckeye, AZ 85326.

### **EIT101 - Energy & Industrial Technology 1**

**1.5 High School Credits**

This course covers safety, tools, technical schematics and energy technologies. The laboratory portion of this course provides hands-on experience for the mechanical and electrical skills required of E&IT technicians. This course is aligned with Occupational Safety and Health Administration (OSHA) and the National Center for Construction Education and Research (NCCER) curriculum. There are dual enrollment opportunities for 6 college credits and two industrial certifications associated with this course.

### **EIT102 - Energy & Industrial Technology 2**

**1.5 High School Credits**

*Prerequisite(s): EIT101 - Energy & Industrial Technology 1*

This course covers pumps, drivers, valves, lubrication and oxy-fuel cutting. The laboratory portion of this course provides hands-on experience for the mechanical and electrical skills required of E&IT technicians. This course is aligned with NCCER curriculum. There are dual enrollment opportunities for 6 college credits and one industrial certification associated with this course.

### **EIT201 - Energy & Industrial Technology 3**

**1.5 High School Credits**

*Prerequisite(s): EIT102 - Energy & Industrial Technology 2*

This course covers piping systems, fluid systems, and mechanical components. The laboratory portion of this course provides hands-on experience for the automation and control systems skills required of E&IT technicians. This course is aligned with NCCER curriculum. There are dual enrollment opportunities for 6 college credits and one industrial certification associated with this course.

### **EIT202 - Energy & Industrial Technology 4**

**1.5 High School Credits**

*Prerequisite(s): EIT201 - Energy & Industrial Technology 3*

This course covers ac/dc theory, process instrumentation, test equipment and digital control equipment. The laboratory portion of this course provides hands-on experience for the automation and control systems skills required of E&IT technicians. This course is aligned with NCCER curriculum. There are dual enrollment opportunities for 6 college credits and one industrial certification associated with this course.

## Fire Science (One year)

The Fire Science program meets two days per week for a total of six hours per week. Community College Credits are awarded when courses are successfully completed. Fire fighters must be EMT certified; therefore, students are advised to complete the Fire Science program as juniors and the Emergency Medical Technician (EMT) program as seniors. In partnership with Maricopa Community Colleges, courses meet three hours per day, twice a week, Monday & Wednesday or Tuesday & Thursday. This program is located at Estrella Mountain Community College, 3000 N. Dysart Road, Avondale, AZ 85392 and Glendale Community College Main Campus, 6000 W. Olive Avenue, Glendale, AZ 85302.

### **FS101 - Introduction to Fire Protection & Suppression**

**1 High School Credit**

FS101 presents a history and evaluation of the fire department organization. Junior and senior students learn the role of the fire service in the community. Students study responsibilities of the fire administrator including organization, departmental functions, interdepartmental relationships, management of buildings and equipment, and techniques of fire-fighting. In addition, students learn emergency medical services and fire prevention and examine characteristics and behavior of fire, fire hazard properties of ordinary materials, extinguishing agents, fire suppression organization and equipment, basic firefighting tactics, and public relations as affected by fire suppression.

### **FS102 - Hazardous Materials/First Responders/Special Projects**

**1 High School Credit**

FS102 teaches students the basic methods of recognition and identification based on chemical and physical properties of hazardous materials; basic safety procedures when utilizing specific types of protective clothing and equipment; basic tactical information relating to scene management. Students will study confined space operations in accordance with the National Fire Protection Agency. Students will be given the opportunity to engage in a unique capstone experience that is organized and tailored around the interests and needs of the individual student. The experience is structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional type facilities and equipment will be available to students. The capstone experience allows the best aspects of independent study and individualized learning to be combined to maximize student development.

## General Construction Technology (One year)

The General Construction Technology program prepares trainees to enter the world of residential and commercial construction. This course will cover the base fundamentals of the following: estimating, concrete, masonry, framing, dry wall, basic electrical, basic plumbing, roofing, hand and power tools, rigging and materials handling, safety. Courses meet three hours per day, Monday through Friday. This program is located at West-MEC Southwest Campus, 500 N. Verrado Way, Buckeye, AZ 85326.

### **GC103 - General Construction I & II**

**2 High School Credits**

This is the first in a series of two courses. General Construction I & II will cover the core curriculum of, construction drawings, basic electricity, safety, power and hand tools, math, estimating skills rigging and business concepts. This course also includes flooring, roof systems, stairs walls, ceiling systems, and exterior finishes (concrete).

### **GC104 - General Construction III & IV**

**2 High School Credits**

*Prerequisite(s): GC103 - General Construction I & II*

This the second course in a series of two. This course covers advanced work in the major content in Construction Technology I and II with an added emphasis placed on Carpentry. This course also includes an overview of information security principles, access control, risk management, and compliance. Covers threats to the IT infrastructure and how they can impact operations. Demonstrates strategies to mitigate risk impacts as they relate to the IT infrastructure. Provides technical knowledge required to execute on the essentials of information security.

- ❖ Upon completion of the one-year program, students may choose to continue in a program of study by taking either the Electrical or Plumbing Trade Specialty Program.



Entrance requirements for West-MEC Central Programs can be found at: <http://www.west-mec.org/>

Elective high school credits awarded each semester.

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## General Construction Technology (Two years)

The General Construction Technology program prepares trainees to enter the world of residential and commercial construction. This course will cover the base fundamentals of the following: estimating, concrete, masonry, framing, dry wall, basic electrical, basic plumbing, roofing, hand and power tools, rigging and materials handling, safety. Courses meet two and one-half hours per day, Monday through Friday. This program is located at West-MEC Northwest Campus, 13201 W. Grand Avenue, Surprise, AZ 85374 and West-MEC Southwest Campus, 500 N. Verrado Way, Buckeye, AZ 85326.

### **GC101 - General Construction I**

**1.5 High School Credits**

This is the first in a series of four courses. General Construction I will cover the core curriculum of, construction drawings, basic electricity, safety, power and hand tools, math, estimating skills rigging and business concepts.

### **GC102 - General Construction II**

**1.5 High School Credits**

*Prerequisite(s): GC101 - General Construction I*

This the second course in a series of four. This course includes flooring, roof systems, stairs walls, ceiling systems, and exterior finishes (concrete)

### **GC201 - General Construction III**

**1.5 High School Credits**

*Prerequisite(s): GC102 - General Construction II*

This is the third course in a series of four. Construction III covers advanced work in the major content in Construction Technology one and two. New Emphasis will be placed on Carpentry.

### **GC202 - General Construction IV**

**1.5 High School Credits**

*Prerequisite(s): GC201 - General Construction III*

This is the final course in a series of four. The content will concentrate on fine tuning the major skills learned in the first three courses and add residential electrical and plumbing. A final building project will be included as well as an opportunity to job shadow or intern.

## IT Security (Two years)

The IT Security program prepares students to work with computer network security. This program will cover the fundamentals of operating systems, network management and security, ethics in information technology and management of information systems. Courses meet two and one-half hours per day, Monday through Friday. This program is located at West-MEC Northwest Campus, 13201 W. Grand Avenue, Surprise, AZ 85374 and West-MEC Southwest Campus, 500 N. Verrado Way, Buckeye, AZ 85326.

### **ITS101 - Information Technologies Fundamentals**

**1.5 High School Credits**

An overview of the fundamental concepts of computer information systems used in personal and business environments. This course introduces computer hardware, software, procedures, systems, languages and human resources. It further explores social and ethical issues related to computer systems, Internet protocol, emerging technologies problem solving and troubleshooting. Preparation for CompTIA A+ examination.

### **ITS102 - IT - Operating Systems**

**1.5 High School Credits**

*Prerequisite(s): ITS101 - Information Technologies Fundamentals*

This course includes knowledge and skills necessary to perform day-to-day administration tasks and troubleshooting in a Microsoft Windows and Linux based operating system environment.

### **ITS201 - IT - Networks, Switches, Routers**

**1.5 High School Credits**

*Prerequisite(s): ITS102 - IT-Operating Systems*

Introduces the architecture, structure, functions, components, and models of the Internet and other computer networks. The principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations are introduced. Students will build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes. Preparation for Cisco certification examination.

### **ITS202 - IT Security**

**1.5 High School Credits**

*Prerequisite(s): ITS201 - IT-Networks, Switches, Routers*

Overview of information security principles, access control, risk management, and compliance. Covers threats to the IT infrastructure and how they can impact operations. Demonstrates strategies to mitigate risk impacts as they relate to the IT infrastructure. Provides technical knowledge required to execute on the essentials of information security.



## Law, Public Safety and Security (Two years)

The Law, Public Safety and Security program prepares students to perform technical services involved with planning, organizing, researching, directing and controlling functions and processes related to the provision of Law, Public Safety and Security services. An integrated approach to teaching and learning is provided as students develop interpersonal relations, career development skills and technical knowledge and skills associated with careers in this growing field. Students completing this program will be prepared to participate in teams, solve problems, think critically, and implement effective solutions. Courses meet two and one-half hours per day, Monday through Friday. This program is located at West-MEC Central Campus - Building B, 6997 N. Glen Harbor Blvd. , Glendale, AZ 85307 and West-MEC Northwest Campus, 13201 W. Grand Avenue, Surprise, AZ 85374.

### **LPS101 - Fundamentals of Law, Public Safety and Security I**

**1.5 High School Credits**

This course introduces students to careers in Law, Public Safety and Security and prepares students to apply academic and technical knowledge and skills related to common industry standards and practices. This course includes fitness standards, defensive tactics, patrol functions, traffic control, firearms safety, report writing, evidence packaging and SWAT.

### **LPS102 - Fundamentals of Law, Public Safety and Security II**

**1.5 High School Credits**

*Prerequisite(s): LPS101 - Fundamentals of Law, Public Safety and Security I*

This course introduces students to careers in Law, Public Safety and Security and prepares students to apply academic and technical knowledge and skills related to common industry standards and practices. This course includes securing the scene, introduction to sketching, impressions evidence, blood spatter analysis, hair and fiber analysis, firearms ballistics, death investigation, community policing, crisis negotiation, building searches, interviewing and interrogation, drug investigations and victim advocacy.

### **LPS201 - Law, Public Safety and Security - Advanced Applications I**

**1.5 High School Credits**

*Prerequisite(s): LPS102 - Fundamentals of Law, Public Safety and Security II*

This course prepares students to apply advanced academic and technical knowledge and skills to a variety of settings within Law, Public Safety and Security. This course includes introduction to corrections, a jail field trip, court testimony, security pathways, incident command, advanced forensics, basic HAZMAT, search and rescue and human tracking.

### **LPS202 - Law, Public Safety and Security - Advanced Applications II**

**1.5 High School Credits**

*Prerequisite(s): LPS201 - Law, Public Safety and Security - Advanced Applications I*

This course prepares students to apply advanced academic and technical knowledge and skills to a variety of settings within Law, Public Safety and Security. This course includes community relations, computer forensics, cyber security, arson investigations, forensic interviewing and odontology, animal control, professional dispatching, bike safety/patrol, accident reconstruction, fraud investigation and insurance investigations.



## Massage Therapy (One year)

The Massage Therapy Program builds strong foundational Massage skills for students planning on entering the rapidly growing Massage Therapy Industry whether they choose to pursue: private practice, spas, fitness centers, sports teams, hospitals, rehabilitation centers, or chiropractic offices. Focus is placed on structural massage – the ability to couple and apply a deep understanding of anatomy with powerful tissue sculpting techniques in order to create radical change in the body. 50% of course time is devoted to hands-on activities including Swedish, Deep Tissue, Myofascial, Sports, Pregnancy, and Asian Massages. 25% of course time is spent on anatomy, physiology, and kinesiology as they pertain to Massage Therapy. The remainder of the course is devoted to addressing specific syndromes, delivering superior service in a safe manner, ethics, and business training applicable to the industry. In partnership with Gateway Community College, courses meet three and one-half hours per day, Monday through Friday. This program is located at Gateway Community College at Deer Valley, 2931 W. Bell Road, Phoenix, AZ 85023.

### **MT101 - Massage Therapy Foundations**

**2.75 High School Credits**

MT101 is the first course of the one-year Massage Therapy program, offered to high school seniors. The course covers basics such as: sanitation, hygiene, safety, massage contraindications, ethics, healthy therapeutic relationships, professional communication, overview of the human body, healthcare terminology, muscle theory, client care, self-care, and Swedish Massage. It then continues with advanced anatomy and massage, focusing in detail on the skeletal and muscular components and manipulations of the upper body. Students are taught all the bones and muscles of the upper body and the kinesiology that develops from their interactions. Corresponding Deep-Tissue Massage for the upper body is taught in conjunction with the advanced anatomy to ensure its practical application. Eastern Massage is taught with an emphasis on Thai Massage and its integration with Western Structural Massage. Recently learned skills will be practiced on the general public during clinic.

### **MT102 - Massage Therapy Services**

**2.75 High School Credits**

*Prerequisite(s): MT101 Massage Therapy Foundations*

The second semester of this advanced anatomy and massage course focuses in detail on the skeletal and muscular components and manipulations of the lower body. Students will learn all the bones and muscles of the lower body and the kinesiology that develops from their interactions. Corresponding Deep-Tissue Massage for the lower body is taught in conjunction with the advanced anatomy to ensure its practical application. Students combine all of their program skills; integrating anatomy, kinesiology, concepts, theories, and techniques to properly assess clients and apply critical thinking in tailoring treatments to individuals with documentation. Common injuries and conditions are covered with specific strategies and protocols to address them. Business skills and entrepreneurial perspectives conducive to the industry of massage therapy are taught along with promotional massage techniques such as chair massage. Recently learned skills will be practiced on the general public during clinic.

## Medical Assisting (One year)

The Medical Assisting program prepares students to deliver vital care services alongside medical professionals, including assisting in office surgeries, performing lab tests, taking vital signs and managing medical front office operations by scheduling appointments, maintaining patient files, and creating records for insurance reimbursement. Courses may include summer clinical experiences. Courses meet four hours per day, Monday through Friday. This program is located at West-MEC Northeast Campus, 1617 W. Williams Drive, Phoenix, AZ 85027 and West-MEC Southwest Campus, 500 N. Verrado Way, Buckeye, AZ 85326.

### **MA103 - Medical Assistant Foundations I & II**

**2.75 High School Credits**

MA103 is the first course of the one-year Medical Assisting program, offered to high school seniors. The course provides students a foundation in the allied health services, including administrative/clinical skills, medical ethics, HIPAA, consent forms, structure of medical words, medical abbreviations, identification of acronyms/symbols, patient scenarios, cells/tissues/organs/body systems, disease process, OSHA standards, hand washing, medical asepsis, vital signs, body temperature, pulse, respiration and preparation of patient for physical exam. The course also allows students to apply learned skills in allied health services. Emphasis will be placed on ledgers/record, patient itemized monthly statements, insurance claims, procedural/diagnostic coding, insurance forms, insurance benefits, prior authorizations for medical services, diagnostic testing, clinic front office duties, electronic medical records, patient data collection, inventory control, patient charts, alphabetical/numerical filings, medical records and business correspondence, including schedules/appointments/referrals.

### **MA104 - Medical Assistant Services I & II**

**2.75 High School Credits**

*Prerequisite(s): MA103 – Medical Assistant Foundations I & II*

MA104 starts the second semester of the one-year Medical Assisting program. A high degree of knowledge and skill is necessary for this course. Subjects covered include medical record components, chart procedures, disease prevention techniques, waste management, sanitizing/disinfecting instruments, wrapping instruments for autoclave, standard precautions, infection control, microbes classification, preparing treatment room, patient history/assessment, height/weight/head circumference, healthcare, EKGs & artifacts, holter monitor, spirometry, instruments, sterile pack, preparing patient for minor surgery, applying sterile gloves, sterile dressing change, suture removal, heat/cold applications, therapeutic ultrasound and casting applications – splints/crutches/canes/walkers/wheelchairs. This course also prepares students for college and career opportunities in the allied health services industry. Students are provided additional work-based learning opportunities in the area of drug classifications, common side effects, medication & immunization records, seven rights of medication administration, drug administration, writing prescriptions, diagnostic testing, lab safety procedures, urinalysis, blood components, skin puncture, culture preparation, throat culture specimen, microscope use, professional attributes, job readiness skills, interview skills, resumes and clinical internship.

## Medical Assisting (Two years)

The Medical Assisting program prepares students to deliver vital care services alongside medical professionals, including assisting in office surgeries, performing lab tests, taking vital signs and managing medical front office operations by scheduling appointments, maintaining patient files, and creating records for insurance reimbursement. Courses may include summer clinical experiences. Courses meet two and one-half hours per day, Monday through Friday. This program is located at West-MEC Northeast Campus, 1617 W. Williams Drive, Phoenix, AZ 85027; West-MEC Northwest Campus, 13201 W. Grand Avenue, Surprise, AZ 85374 and West-MEC Southwest Campus, 500 N. Verrado Way, Buckeye, AZ 85326.

### **MA101 - Medical Assistant Foundations I**

**1.5 High School Credits**

MA101 is the first course of the two-year Medical Assisting program, offered to high school juniors. The course provides students a foundation in the allied health services, including administrative/clinical skills, medical ethics, HIPAA, consent forms, structure of medical words, medical abbreviations, identification of acronyms/symbols, patient scenarios, cells/tissues/organs/body systems, disease process, OSHA standards, hand washing, medical asepsis, vital signs, body temperature, pulse, respiration and preparation of patient for physical exam.

### **MA102 - Medical Assistant Foundations II**

**1.5 High School Credits**

*Prerequisite(s): MA101 - Medical Assistant Foundations I*

MA102 is the second course of the two-year program. The course allows students to apply learned skills in allied health services. Emphasis will be placed on ledgers/record, patient itemized monthly statements, insurance claims, procedural/diagnostic coding, insurance forms, insurance benefits, prior authorizations for medical services, diagnostic testing, clinic front office duties, electronic medical records, patient data collection, inventory control, patient charts, alphabetical/numerical filings, medical records and business correspondence, including schedules/appointments/referrals.

### **MA201 - Medical Assistant Services I**

**1.5 High School Credits**

*Prerequisite(s): Completed first year of Medical Assistant program*

MA201 starts the second year of the two-year Medical Assisting program. A high degree of knowledge and skill is necessary for this course. Subjects covered include medical record components, chart procedures, disease prevention techniques, waste management, sanitizing/disinfecting instruments, wrapping instruments for autoclave, standard precautions, infection control, microbes classification, preparing treatment room, patient history/assessment, height/weight/head circumference, healthcare, EKGs & artifacts, holter monitor, spirometry, instruments, sterile pack, preparing patient for minor surgery, applying sterile gloves, sterile dressing change, suture removal, heat/cold applications, therapeutic ultrasound and casting applications – splints/crutches/canes/walkers/wheelchairs.

**MA202 - Medical Assistant Services II****1.5 High School Credits**

*Prerequisite(s): MA201 - Medical Assistant Services I*

This final course of the two-year medical assistant program prepares students for college and career opportunities in the allied health services industry. Students are provided additional work-based learning opportunities in the area of drug classifications, common side effects, medication & immunization records, seven rights of medication administration, drug administration, writing prescriptions, diagnostic testing, lab safety procedures, urinalysis, blood components, skin puncture, culture preparation, throat culture specimen, microscope use, professional attributes, job readiness skills, interview skills, resumes and clinical internship.

## Medium/Heavy Diesel Technology (Two years)

The Medium/Heavy Diesel Technology program may include a summer work internship between the junior and the senior years. Courses meet two and one-half hours per day, Monday through Friday. This program is located at West-MEC Northeast Campus, 1617 W. Williams Drive, Phoenix, AZ 85027.

### **MHD101 - Diesel Engine/Core Curriculum**

**1.5 High School Credits**

MHD101 is the first course of the two-year Medium/Heavy Diesel Technology program, offered to junior students through a partnership with West-MEC (Western Maricopa Education Center). The course introduces diesel engine repair and maintenance, brakes, suspension and steering, electrical components and hydraulics.

### **MHD102 - Diesel Engine Maintenance**

**1.5 High School Credits**

*Prerequisite(s): MHD101 - Diesel Engine/Core Curriculum*

MHD102 is the second course of the two-year Medium/Heavy Diesel Technology program. The course allows students to apply learned skills in the maintenance and repair of diesel engines, brakes, suspension and steering, electrical components and hydraulics. Emphasis will be placed on diagnosis and actual repair of these systems. In addition, students are prepared for job shadowing and internship experiences.

### **MHD201 - Diesel Electric/Electronic Systems**

**1.5 High School Credits**

*Prerequisite(s): Completed first year of Medium/Heavy Diesel Technology program*

MHD201 starts the second year of the two-year Medium/Heavy Diesel Technology program. A high degree of knowledge and skill is necessary for this course. Subjects covered include safety, tools, diesel engines, suspension and steering, brakes, electrical/electronic systems, preventative maintenance inspections, hydraulics, and Career and Technical Student Organizations (SkillsUSA). This course may extend beyond the regular school day due to internships.

### **MHD202 - Diesel Advanced Technologies**

**1.5 High School Credits**

*Prerequisite(s): MHD201 - Diesel Electric/Electronic Systems*

This final course of the two-year Medium/Heavy Diesel Technology program prepares students for the Automotive Service Excellence (ASE) certification exam. Students are provided additional work-based learning opportunities in the area of the maintenance and repair of diesel engines, brakes, suspension and steering, electrical components and hydraulics.

❖ Upon completion of the two-year program, students may take the ASE Certification Exam.



Entrance requirements for West-MEC Central Programs can be found at: <http://www.west-mec.org/>

Elective high school credits awarded each semester.

Revised: 1/25/18

## Pharmacy Technician (One year)

The Pharmacy Technician program prepares students to deliver pharmacy services alongside licensed pharmacists within a pharmacy setting. This program may include an off-site shadowing experience and will cover the fundamentals of the following: medical terminology, safety, pharmacy law, quality customer service, applied math, pharmacology, preparing prescription medications, administrative duties, inventory on all drugs to verify expiration Date Range and recalled items, operating cash register. Courses meet two and one-half hours per day, Monday through Friday. This program is located at West-MEC Northeast Campus, 1617 W. Williams Drive, Phoenix, AZ 85027 and West-MEC Southwest Campus, 500 N. Verrado Way, Buckeye, AZ 85326.

### **PT101 - Pharmacy Technician I**

**1.5 High School Credits**

PT101 is the first course of a one-year Pharmacy Technician program offered to high school seniors. The course provides students a foundation in the allied health services, including administrative/clinical skills, medical ethics/pharmacy law, HIPAA compliance, medical terminology, applied math, pharmacology, OSHA Law and Regulations, and providing quality customer service.

### **PT102 - Pharmacy Technician II**

**1.5 High School Credits**

*Prerequisite(s): PT101 Pharmacy Technician I*

PT102 is the second course of a one-year program. The course allows students to apply academic concepts in a pharmacy setting. Emphasis will be placed on processing prescriptions, reviewing physician orders for proper dosage, drug allergies, and incompatibilities, data processing for insurance purposes using computer hardware and software systems, acting as a liaison between the pharmacy and the physician's office for prescription requests and authorizations, counting tablets, labeling bottles, along with administrative functions such as: answering phones, stocking shelves, and taking inventory.

## Physical Therapy Technician (One Year)

The Physical Therapy Technician program provides an integrated approach to teaching and learning as students develop interpersonal relations, career development skills and technical knowledge and skills associated with careers in this growing field. Students completing this program will be prepared to participate in teams, solve problems, think critically, and implement effective solutions. Courses meet two and one-half hours per day, Monday through Friday. This program is located at West-MEC Northwest Campus, 13201 W. Grand Avenue, Surprise, AZ 85374.

### **PHY101 - Fundamentals of Physical Therapy**

**1.5 High School Credits**

PHY101 is the first course in the program and will teach students the basic knowledge and skills needed for Physical Therapy and Rehabilitation Services in a clinical, medical or retail setting or to continue postsecondary education.

### **PHY102 - Physical Therapy and Rehabilitation Services - Advanced Applications**

**1.5 High School Credits**

*Prerequisite(s): PHY101 Fundamentals of Physical Therapy*

PHY102 is the second course in the program and will enhance the students' knowledge and skills to continue their education in a clinical, medical or retail setting or to continue to postsecondary education.



## **Plumbing Trade Specialty (One year)**

The Plumbing Trade Specialty program prepares trainees to enter the plumbing field. This course will cover the base fundamentals of the following: construction math, power & hand tools, basic rigging, material handling, communication skills, construction drawings, and employability skills. Students will also learn about plastic pipe, copper pipe, cast-iron pipe, carbon steel pipe, PEX, fittings, fixtures, drains, waste, vent, and water distribution systems, valves, water heaters, fuel gas and oil systems, structural penetrations, insulation, and firestopping. Courses meet two and one-half hours per day, Monday through Friday. This program is located at West-MEC Northeast Campus, 1617 W. Williams Drive, Phoenix, AZ 85027.

### **PLU101 - Introduction to Plumbing**

**1.5 High School Credits**

This is the first in a series of two courses. This course is designed to help students develop an enhanced understanding of teamwork, employability skills, and career opportunities in the plumbing field. Introduction to Plumbing will cover the core curriculum of construction math, power & hand tools, basic rigging, material handling, communication skills, construction drawings, and employability skills. The course will provide an introduction to plumbing drawings, plastic pipe, copper pipe, cast-iron pipe, carbon steel pipe, PEX, fittings, fixtures, and DWV and water distribution systems.

### **PLU102 - Intermediate Plumbing**

**1.5 High School Credits**

*Prerequisite(s): PLU101 Introduction to Plumbing*

This is the second course in a series of two. This course prepares the individual to apply and demonstrate advanced technical knowledge and skills using a variety of techniques and equipment. Students will be trained on commercial drawings, testing DWV piping, installing drains, water supply piping, valves, water heaters, fuel gas and oil systems, structural penetrations, insulation, and firestopping. Students will also plan, design, and complete project-based activities.

## Precision Machining (Two years)

The Precision Machining program prepares students for careers in the broad field of manufacturing as well as preparing students to move immediately into the Arizona Precision Machining Apprenticeship Program and higher education. The Precision Machining program prepares individuals to shape metal parts on machines such as lathes, grinders, drill presses, and milling machines. Included is instruction in making computations related to work dimensions, testing, feeds, and speeds of machines as well as using precision measuring instruments such as layout tools, micrometers and gauges. Also included is instruction in the operation and maintenance of computerized equipment. Students exiting this program will have a broad array of skills to prepare them for careers associated with manufacturing sectors such as aerospace, communications, electronics, medical devices, solar technology and more. Courses meet two and one-half hours per day, Monday through Friday. This program is located at West-MEC Central Campus - Building B, 6997 N. Glen Harbor Blvd. , Glendale, AZ 85307.

### **PM101 - Precision Manufacturing Foundations I**

**1.5 High School Credits**

PM 101 is the first course of the two-year Precision Machining program offered to high school juniors and seniors. This course provides students with a foundation in Precision Machining. Skills to be learned include industrial safety, statistical process and control, blueprint reading, computer aided drafting and material properties.

### **PM102 - Precision Manufacturing Foundations II**

**1.5 High School Credits**

*Prerequisite: PM101 - Precision Manufacturing Foundations I*

PM 102 is the second course of the two-year program. Skills to be learned in this course build upon those learned in the first course. These skills include technical math, lean manufacturing, solid programming, geometric dimensioning and tolerancing, and solid modeling.

### **PM201 - Intermediate Precision Machining**

**1.5 High School Credits**

*Prerequisites: PM102 - Precision Manufacturing Foundations II*

PM 201 starts the second year of the two-year Precision Machining program. During this course students will do extensive work with Precision Machining equipment. Skills to be gained during this course include machine processes, theory and application, basic machining, CNC programming and CNC mill operation.

### **PM202 - Advanced Precision Machining**

**1.5 High School Credits**

*Prerequisites: PM201 Intermediate Precision Machining*

The final course of the two-year Precision Machining program prepares students to exit into the Arizona Precision Machining Apprenticeship Program, higher education or the world of work. During the course students will obtain skills related to CNC lathe operation, CNC mill operation, and advanced machining. Students will also have the opportunity to participate in work-based learning.



## Veterinary Sciences (One Year)

The Veterinary Sciences program prepares students to deliver vital care services alongside veterinarian medical professionals for dogs, cats, exotics and exposure to large animals like horses. The experiences include assisting in the surgery room, intensive care unit (ICU), taking vital signs, nursing care for animals, clinical office operations, x-rays and imaging, facility safety and cleanliness, and a general care and exercise program for the animals. Courses meet four hours per day, Monday through Friday. This program is located at West-MEC Northeast Campus, 1617 W. Williams Drive, Phoenix, AZ 85027.

### **VS103 - Veterinary Sciences Foundations I & II**

**2.75 High School Credits**

This is the first course in a series of two. The course provides a foundation in Veterinary Sciences including the following: veterinary terminology, anatomy and physiology, examination procedures, pharmacy and pharmacology, vaccinations, basic animal nursing and care, and safety. The course will also cover the following: lab procedures, radiology and ultra sound, small animal nursing, office and hospital clinic procedures, business and administration in a clinic, and hospital safety.

### **VS104 - Veterinary Assistant Services I & II**

**2.75 High School Credits**

*Prerequisite(s): VS103 - Veterinary Sciences Foundations I & II*

This is the final course in a series of two. The course will include the following: laboratory record keeping, dentals, emergency care, surgical preparation and assisting, large animal introduction, front desk operations and customer relations, exam room set up and operation. This course also includes rotation through all aspects of the Veterinary clinic (30 hours in 8 major departments), a final project and preparation for any certifications.

## Veterinary Sciences (Two years)

The Veterinary Sciences program prepares students to deliver vital care services alongside veterinarian medical professionals for dogs, cats, exotics and exposure to large animals like horses. The experiences include assisting in the surgery room, intensive care unit (ICU), taking vital signs, nursing care for animals, clinical office operations, x-rays and imaging, facility safety and cleanliness, and a general care and exercise program for the animals. Courses meet two and one-half hours per day, Monday through Friday. This program is located at West-MEC Northeast Campus, 1617 W. Williams Drive, Phoenix, AZ 85027.

### **VS101 - Veterinary Sciences Foundations I**

**1.5 High School Credits**

This is the first course in a series of four. The course provides a foundation in Veterinary Sciences including the following: veterinary terminology, anatomy and physiology, examination procedures, pharmacy and pharmacology, vaccinations, basic animal nursing and care, and safety.

### **VS102 - Veterinary Sciences Foundations II**

**1.5 High School Credits**

*Prerequisite(s): VS101 - Veterinary Sciences Foundations I*

This is the second course in a series of four. The course will cover the following: lab procedures, radiology and ultra sound, small animal nursing, office and hospital clinic procedures, business and administration in a clinic, and hospital safety.

### **VS201 - Veterinary Assistant Services I**

**1.5 High School Credits**

*Prerequisite(s): VS102 - Veterinary Sciences Foundations II*

This is the third course in a series of four. The course will include the following: laboratory record keeping, dentals, emergency care, surgical preparation and assisting, large animal introduction, front desk operations and customer relations, exam room set up and operation.

### **VS202 - Veterinary Assistant Services II**

**1.5 High School Credits**

*Prerequisite(s): VS201 - Veterinary Assistant Services I*

This is the final course that includes rotation through all aspects of the Veterinary clinic (30 hours in 8 major departments), a final project and preparation for any certifications.

## Welding Technology (Two years)

The Welding Technology Program prepares students for careers in the welding industry by focusing on incremental levels of competency based training. In addition to welding safety practices, the individual will be introduced to the common welding processes used throughout many parts of the industry such as SMAW (Stick welding), GMAW (MIG welding), FCAW (Flux cored arc welding), GTAW (TIG welding) and Oxy-fuel cutting. Included is instruction in blue print reading, weld symbol interpretation, basic metallurgy, weld quality, base metal preparation, and joint fit-up and alignment. Instruction also includes machine set-up, filler material selections and basic equipment maintenance. The program starts with plate and structural welding progressing to pipe and tubing configurations which prepares the student for a broad array of industry sectors such as pipeline, shipyard, power plant, buildings, bridges and aerospace applications. Courses meet two and one-half hours per day, Monday through Friday. This program is located at West-MEC Central Campus - Building B, 6997 N. Glen Harbor Blvd. , Glendale, AZ 85307 and West-MEC Southwest Campus, 500 N. Verrado Way, Buckeye, AZ 85326.

### **WLD101 - SMAW Plate Welding**

**1.5 High School Credits**

WLD 101 is the first course of the two-year Welding Program offered to high school junior and seniors. This course provides students with a foundation in welding technology. Skills to be learned include welding safety, blue print reading, weld symbol interpretation, thermal cutting, SMAW beads and fillets, SMAW Grooves with backing.

### **WLD102 - FMAW/FCAW and GTAW Plate Welding**

**1.5 High School Credits**

*Prerequisite: WLD101 - SMAW Plate Welding*

WLD 102 is the second course of the two-year program. Skills to be learned in this course build upon those learned in the first course. These skills include weld quality, base metal preparation, GMAW/FCAW plate welding, and GTAW plate welding.

### **WLD201 - SMAW Pipe Welding**

**1.5 High School Credits**

*Prerequisites: WLD102 - FMAW/FCAW and GTAW Plate Welding*

WLD 201 starts the second year of the two-year welding program. During this course students will be introduced to basic metallurgy, preheat and post heating of welds, SMAW pipe welding with backing and SMAW pipe welding without backing (open root). Students will also complete the American Welding Society SENSE school final competencies which will earn them industry certifications as a Level 1 Entry Welder.

### **WLD202 - GMAW/FCAW and GTAW Pipe Welding**

**1.5 High School Credits**

*Prerequisites: WLD201 - SMAW Pipe welding*

WLD 202 is the final course of the two-year welding program. Skills to be gained during this course relate to pipe and tubing welding using the GMAW/FCAW and GTAW processes. Students will be prepared to enter the welding industry with pipe welding theory and skills which will be advantageous in securing internships and apprenticeships.

