

Energy & Manufacturing Systems

2023-24



**ENERGY &
MANUFACTURING
SYSTEMS**

TWO-YEAR PROGRAM - 900-hour program

IN PARTNERSHIP WITH APS, PALO VERDE & ESTRELLA MOUNTAIN COMMUNITY COLLEGE

- Utilize emerging technologies to sustainably meet increasing energy demands
- Design, construct, and maintain industrial, mechanical, electrical, and automated systems
- Identify and apply creative solutions, as part of a team, to complex engineering challenges

PROGRAM REQUIREMENTS*

- Current Sophomore, Junior, and Senior students may apply
 - One credit of English with a C or better
 - One credit of Math with a C or better
 - Students who do not meet program requirements may apply under a “Student Success Action Plan” through their high school counselor.
 - Meeting application criteria does not guarantee enrollment.
 - Copy of unofficial transcript
 - Proof of residency in West-MEC district boundaries
 - Transportation is not provided by West-MEC. Families are responsible for providing transportation to and from West-MEC.
- *Program requirements are subject to change per industry age restrictions, certification requirements, and administrative discretion.

COST REQUIREMENTS

Upon enrollment into the program:

- \$150.00 non-refundable registration fee includes enrollment processing, supplies, leadership development, & uniform shirts. Other uniforms/supply requirements are the responsibility of the student.
 - Leadership development training is embedded through membership and participation in the Career and Technical Student Organization, Skills USA.
- The dress code is reviewed annually to meet professional industry standards. Dress code requirements will be addressed prior to the start of classes.
- Optional dual enrollment will result in additional fees.
- After Early Graduation, Graduation, or GED completion, registration fee and tuition will apply*

*Details regarding additional tuition costs are available [Tuition Payment Agreement](#).

INDUSTRY CERTIFICATION

TEST FEES PREPAID BY WEST-MEC

- This industry credential is preferred for employment in the field a majority of the time is sought after by employers, candidates with this industry credential are likely to be given priority in hiring over others who do not hold it
 - National Coalition of Certification Centers (NC3)
 - Fundamentals of Mechanical Systems Level 1 and Applied Mechanical Systems Level 2
 - Fundamentals of Fluid Power - Hydraulics/Pneumatics Level 1 and Applied Fluid Power Technology Level 2
 - Fundamentals of Electricity - AC/DC
 - Applied Motor Controls
 - Fundamentals of Industry 4.0 Smart Sensors
 - Fundamentals of PLCs and Sensor Technology and Applied PLC Technology II
 - Introduction to Mechatronics Industry 4.0
 - Fundamentals of Robotics and Applied Robotics
 - OSHA-10 Construction

CAREER PATHWAYS

- Graduates of this program should qualify for a variety of careers as an on-the-job trainee or apprentice in fields such as Robotics Technician, Automation Technician, Electrical and Instrumentation Technician, Electronics, Process Controls, and Mechanical Technician, Engineering Technician, Power Plant Generation, Industrial Plant Operations, and Energy Transmission and Distribution, CTE teacher*
- Entry level salary range: \$18.32 - \$28.60 per hour**

*with additional education in this pathway | **Bureau of Labor Statistics, Occupational Employment & Wages

Program information may change as West-MEC strives to provide the best opportunities for students. Refer to www.west-mec.edu for the most current information. Program is taught by industry-certified instructors. West-MEC does not discriminate on the basis of race, color, national origin, gender, age, or disability in admission to its programs, services, or activities, in access to them, in treatment of individuals, or in any aspect of their operations.



LOCATION & HOURS

West-MEC Southwest Campus:

500 N Verrado Way
 Buckeye AZ 85374
 623.872.6260

Monday - Friday

1st Year: 7:00 AM - 9:30 AM
 1:00 PM - 3:30 PM
 2nd Year: 7:00 AM - 9:30 AM
 1:00 PM - 3:30 PM

NOTE: West-MEC & high school calendars may not align & transportation is provided by the student/parent.

ENROLLMENT INFORMATION

- West-MEC programs are competitive.
- Students may only be enrolled in **one** West-MEC Central Program at a time.
- Applications are ranked, in part, by attendance, GPA, discipline, and career choice (ECAP)
- Program hours are not excused for participation in extracurricular activities, athletics, vacation, or employment.
- Copy of birth certificate and immunizations due at time of registration
- West-MEC priority application submission date is in February. Contact your school counselors for your school's application deadline.
- West-MEC provides accommodations and modifications identified in the IEP/504 for high school students. Students who graduate from high school or have a GED will not be eligible for IEP services. Graduated students will need to self-advocate for reasonable accommodations which are aligned with industry certifications.

STUDENT SUCCESS INDICATORS

- History of good attendance and discipline, and on track for graduation
- Strong interest in chosen career pathway
- Manual dexterity and physical ability to use tools, equipment, and machinery
- Ability to get along with other students and cooperate with the instructor
- Ability to work accurately/follow procedures to an industry-standard
- Strong technical reading and study skills; the textbook for this course is written at the college reading level

GRADING SCALE

Grade	A	B	C	D	F
Percent	90%-100%	80%-89%	70%-79%	60%-69%	59% or below

CREDITS ISSUED BY WEST-MEC

- High School - 6 elective credits (credits are awarded each semester)
- This program satisfies AZ university's admissions requirements. (AZ Board of Regents CTE/Fine Arts credit)

EARLY COLLEGE PATHWAYS (OPTIONAL)

- West-MEC has a strong partnership with Maricopa Colleges, and we strive to provide robust post-secondary opportunities for students.
- Dual Enrollment is for eligible High School students who want to earn college credits while taking West-MEC courses.
- Students can earn community college credit for classes and, upon graduation, transfer the credits towards specific degrees at a community college or university.
- High school graduates or students with a GED are not eligible to participate in Dual Enrollment.
- Due to staffing and curriculum changes, we advise the following:
 - Dual Enrollment is offered based on West-MEC faculty qualifications.
 - Dual Enrollment may not be offered in every program or on every campus.
 - Dual Enrollment credit offerings and college pathways are finalized every year during the first month of school.
- Post-secondary pathways, including Dual Enrollment, are updated on [Early College Pathways](#).

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