



Course Descriptions

General

All courses taught at the SMJUHSD Career Technical Center and Agricultural Farm (CTECAF) are two period classes and are yearlong. Classes are for Juniors and Seniors with priority going to Seniors. For 2022-2023 classes are grouped as: 1-2, 3-4, & 5-6. Students earn 10 Credits Per Semester, 20 credits total. They are CTE Completers upon completion of the one year, 20 credits assuming they pass with a C- or higher. Courses, as all pathway courses, must be taken in sequence per CDE rules.

2022-2023 Program Offerings

AG Farm
Culinary

Diesel
Machining

Residential & Commercial
Construction

Agricultural Farm

This course is modeled after AHC AG 190 and prepares students for transition to AHC or Cal Poly to participate in their farm programs. Our goal is to have this AHC Concurrent in 2023-2024. This course provides an opportunity to examine and improve the Mark Richardson CTECAF on-campus Student Farm. Students will gain the ability to design and implement basic farming techniques that can be used on either a small or medium-size farm during Fall-Winter and then Spring-Summer crop seasons. Students will develop fundamental management, business, cultivation, and harvesting techniques throughout this course. At the end of the course, students can apply the necessary skills learned to start their own small-scale farm or apply them in the local agriculture industry. Produce safety will also be addressed. *Outdoor labor is required.*

Certifications: OSHA 10 Safety, NCCER Trade Craft Certification (Student chooses one of the major trades).

Intermediate Agricultural Farm (Course ID TBD)

GRADE LEVEL: 11 - 12

REQUIREMENTS FULFILLED: AHC A-G AP CTE Concentrator

Advanced Agricultural Farm (Course ID TBD)

GRADE LEVEL: 11 - 12

REQUIREMENTS FULFILLED: AHC A-G AP CTE Completer

Culinary

Prepares students for further study in Culinology at AHC or a university. In this program students apply culinary techniques, food science technology and nutritional science principles to the production of quality food. Entry-level positions may include food preparation, line cook, entry level food and beverage service positions. Through further study, skills are transformed into careers such as corporate executive chefs, directors for food research and development, flavorists, food scientist/technologists, menu development professionals, product assurance and development.

Certifications: Food Handler's, Safe Serv, OSHA 10.

AHC CA119 Intro to the Hospitality Industry

GRADE LEVEL: 11 - 12

REQUIREMENTS FULFILLED: AHC A-G AP CTE Concentrator



Course Descriptions

(Culinary Continued)

AHC CA124 Sanitation, Safety & Equipment

GRADE LEVEL: 11 – 12

REQUIREMENTS FULFILLED: AHC A-G AP CTE Concentrator

AHC CA120 Principles of Foods1

GRADE LEVEL: 11 – 12

REQUIREMENTS FULFILLED: AHC A-G AP CTE Completer

Diesel

Prepares students for a variety of entry-level positions involving medium/heavy duty diesel repair. These positions may include work on over the road trucks, tractors, construction equipment and more generally in the diesel sales, repair, and support industry. Learned skills include the ability to diagnose and repair diesel engines. Local partners include Quinn CAT, John Deere and Santa Maria Truck Center (Freightliner/Mercedes).

Certifications: OSHA 10 Safety, Automotive HVAC, ASE Level 1 Diesel.

We have two possible pathway options depending on hiring. An AHC pathway (our preferred choice) & a district course pathway (only used if we cannot hire an AHC approved instructor). We will think positively and board the AHC pathway. Only AHC information is presented below.

AHC Pathway:

AHC AT 100 Automotive Fundamentals

GRADE LEVEL: 11 – 12

REQUIREMENTS FULFILLED: AHC A-G AP CTE Concentrator

AHC AT 303 Automotive Electricity

GRADE LEVEL: 11 – 12

REQUIREMENTS FULFILLED: AHC A-G AP CTE Completer

Machining and Forming

Prepares students for variety of entry level positions in a manufacturing environment. Positions may include manual machine operator, computer numerical control (CNC) operator, computer aided drafting and manufacturing (CAD/CAM) designer, manufacturing generalist or programmer. Learned skills may include the ability to operate conventional and computer numerical controlled (CNC) machinery, program CNC machinery, operate various CAD/CAM systems and interpret blueprints, material handling and quality control.

Certifications: OSHA 10 Safety, HAAS Machine Operator Certification, Solidworks.

MT109 - Survey of Machining and Manufacturing

GRADE LEVEL: 11 - 12

PREREQUISITE: N/A

REQUIREMENTS FULFILLED: AHC A-G AP CTE Concentrator

An introduction to machining and manufacturing technology where students will learn basic tool geometry, blueprint reading, shop math, precision measuring tools, coordinate systems and how to safely operate a variety of industrial equipment.



Course Descriptions

(Machining Continued)

MT113 - SolidWorks 1 IT5000

GRADE LEVEL: 11 - 12

PREREQUISITE: N/A

REQUIREMENTS FULFILLED: AHC A-G AP CTE **Concentrator**

An introduction to three dimensional computer-aided-design (CAD) where students will learn to design complex objects using SolidWorks. Students will be able to bring their designs to life with 3d printers.

MT116 - Master Cam IT5001

GRADE LEVEL: 11-12

PREREQUISITE: MT 113

REQUIREMENTS FULFILLED: AHC A-G AP CTE **Completer**

Residential and Commercial Construction

Prepares students for employment within the construction field with knowledge of general practices within the construction industry, such as residential and commercial building. Entry level employment and/or placement into a trade union in the specialized trades (e.g. electrician, carpenter, plumbing etc.). Learned skills may include: framing, electrical, plumbing, weatherization, blueprint reading, drywall, tile setting, roofing and more.

Certifications: OSHA 10 Safety, NCCER Trade Craft Certification (Student chooses one of the major trades).

Intermediate Residential & Commercial Construction ND7020

GRADE LEVEL: 11 - 12

REQUIREMENTS FULFILLED: AHC A-G AP CTE **Concentrator**

Advanced Residential & Commercial Construction ND7021

GRADE LEVEL: 11 - 12

REQUIREMENTS FULFILLED: AHC A-G AP CTE **Completer**