



**SANTA CLARA COUNTY OFFICE OF EDUCATION
SANTA CLARA COUNTY REGIONAL OCCUPATIONAL PROGRAM
Serving Santa Clara and San Benito Counties**



1. COURSE TITLE – CAREER TECHNICAL EDUCATION PATHWAY/SECTOR

Agricultural Construction and Maintenance – Agricultural Mechanics / Agriculture and Natural Resources

2. CBEDS TITLE

Mechanics and Engineering Technology

3. CBEDS NUMBER

4030

4. JOB TITLES

O*NET	TITLE
79021	Farm Equipment Operator/Machine Tender
79999D	Farmer – General
85321	Farm Equipment Mechanic Apprentice
93105	Farm Machinery Assembler

5. COURSE DESCRIPTION

The program is geared to job-entry development of a variety of skills utilized by farming and ranching industries. The student will gain knowledge and perfect existing skills in the areas of welding, carpentry, and metalworking. Specifically, they will be able to make minor repairs on farm machinery and construct small tools and appliances frequently needed at the place of employment.

6. HOURS

Classroom Theory/Applied	255
Community Classroom/Coop Voc Ed	90
TOTAL HOURS	345

7. RECOMMENDED PREREQUISITE

Required	Must be 16 years of age or older, a junior or senior in high school, an out-of-school youth, or an adult.
Recommended	None

**8. DATE WRITTEN July 2005
 UPDATED September 2007**

B. Career Technical Skills						
Class Hours	CC/CVE Hours	CONTENT AREA SKILLS	Foundation Standards	Mention - M Reinforced - R Taught - T	CTE Pathway Standards	Mention - M Reinforced - R Taught - T
40	15	E. Electrician Helper – Students will demonstrate proper techniques and procedures used in electrical wiring lay out and installation including: 1. Basics of electricity both AC and DC 2. Electrical terms 3. Wiring materials 4. Types of wiring: conduit and romex 5. Amperage and voltage drop: wire size, material and length 6. Voltages: 110 and 220 volt 7. Importance of ground wire 8. Fuses/ circuit breakers 9. Wiring/wiring diagrams 10. Safety and precautions	4.1	M	B 3.1	T
			4.3	M	B 3.2	T
			4.5	M	B 3.3	T
			4.6	R	B 3.4	T
			5.3	R	B 3.5	R
			3.1	M		
			6.1	R		
			2.1	R		
			5.1	R		
			5.2	R		
			5.3	R		
		7.1	R			
		7.6	R			
		8.2	T			
		11.0	R			
35	10	II. UTILITIES - PLANNING AND INSTALLATION				
		A. Plumbing – Students will demonstrate knowledge of: 1. Types and sizes of pipes 2. Cutting, threading, measuring, fitting of pipe 3. Installation techniques 4. Planning, determining costs 5. Drain pipe and tile 6. Sprinkler system 7. Mist system	4.6	R	B 4.1	T
			5.3	R	B 4.2	T
			2.1	R		
			5.1	R	B 4.3	T
			5.2	R		
			5.3	R	B 4.4	R
			7.1	R		
			7.6	R		
			8.2	T		
			6.1	R		
		11.0	R			
		3.1	M			

B. Career Technical Skills						
Class Hours	CC/CVE Hours	CONTENT AREA SKILLS SPECIALIZATION	Foundation Standards	Mention - M Reinforced - R Taught - T	CTE Pathway Standards	Mention - M Reinforced - R Taught - T
100	50	III. STRUCTURES - CARPENTRY, FENCING				
40	10	A. Building Parts and Design – Students will demonstrate skills in <ol style="list-style-type: none"> 1. Foundations <ol style="list-style-type: none"> a. Frame building b. Concrete block building 2. Floors <ol style="list-style-type: none"> a. Woods b. Concrete 3. Walls <ol style="list-style-type: none"> a. Frame b. Block 4. Roofs and Ceiling <ol style="list-style-type: none"> a. Rafters b. Coverings 	AI 10.0 AI 12.0 AI 13.0 AI 15.0 G 8.0 G 11.0 G 12.0 2.1 5.1 5.2 5.3 7.1 7.6 8.2 6.1 11.0 3.1	R R R R R R R R R R R R R R R R R M	B 6.2 B 12.5 B 2.1 B 2.2 B 2.3 B 2.4 B 6.1 B 12.6	T T R R R R R R R
40	10	B. Construction Skills – Students will demonstrate skills in <ol style="list-style-type: none"> 1. Concrete Work <ol style="list-style-type: none"> a. Laying out a building b. Forms and forming c. Foundations and floors d. Mix, place and finish concrete 2. Framing Structures <ol style="list-style-type: none"> a. Subfloors and floors b. Walls and partitions c. Roof and ceilings 3. Surfacing <ol style="list-style-type: none"> a. Flooring b. Walls c. Roofing 	AI 10.0 AI 12.0 AI 13.0 AI 15.0 G 8.0 G 11.0 G 12.0 2.1 5.1 5.2 5.3 7.1 7.6 8.2 6.1 11.0 3.1	R R R R R R R R R R R R R R R M	B 6.1 B 6.2 B 6.3 B 12.6	R R R T

B. Career Technical Skills								
Class Hours	CC/CVE Hours	CONTENT AREA SKILLS			Foundation Standards	Mention - M Reinforced - R Taught - T	CTE Pathway Standards	Mention - M Reinforced - R Taught - T
33	10		Fencing – Students will demonstrate knowledge of 1. Types a. Selection b. Materials c. Costs 2. Planning and Layout a. Location of gates, braces and stretch posts b. Measurements 3. Construction a. Set fence posts and braces (1) Wire-field, hog, barbed, etc. (2) Wood-corrals (3) Ornamental	AI 10.0	R	B 12.6	R	
				AI 12.0	R	B 5.5	R	
				AI 13.0	R			
				AI 15.0	R			
				G 8.0	R			
				G 11.0	R			
			G 12.0	R				
			2.1	R				
			7.1	R				
			7.6	R				
			8.2	T				
			6.1	R	B 11.0	T		
			3.1	M				
			11.0	R				
288	90	Total Hours						

C. Expected Student Proficiencies

ATTITUDE AND WORK HABITS

- Works both independently and collaboratively
- Attends regularly and on time
- Practices good safety procedures
- Solves problems thinks critically and makes good decisions
- Plans work and takes initiative
- Demonstrates leadership and the willingness to help train others

CAREER PREPARATION SKILLS

- Identifies appropriate careers and resources for training
- Identifies job resources
- Demonstrates interview skills
- Demonstrates knowledge of techniques for getting a job

CONSTRUCTION

- Safely uses common hand and power tools
- Figures costs of a list of materials
- Prepares working drawings and reads blueprints

- Demonstrates proper techniques and procedures used in fence construction
- Able to do basic framing structures
- Demonstrates proper techniques and procedures used in plumbing layout and installation
- Demonstrates electrical wiring layout and installation
- Demonstrates proper use of paints and equipment

10. ADDITIONAL RECOMMENDED/OPTIONAL ITEMS

A. **Academic credit:** One year or 10 units

B. **Other**

ARTICULATION None

UC APPROVAL None

X INDUSTRY CERTIFICATION NOCTI

C. **Instructional Strategies:**

- | | |
|----------------------------------|-----------------------------|
| • Lecture | • Guest presentations |
| • Demonstration | • Group projects |
| • Design problems and vocabulary | • Computer programs |
| • Critical comparison | • Field trips |
| • Readings | • Videos |
| • Project-based learning | • Internet research |
| • Work-based learning | • Peer learning |
| | • NOCTI External Assessment |

D. **Instructional Materials:**

- Cooper, Elmer L.; Herren, Ray V. Agriculture Mechanics: Fundamentals & Applications 4th Edition. (Albany, NY: Delmar Publishers, 2004).
- Worksheets, Lab Manual, Agriculture Core Curriculum, FFA Student Manual, Videos, FFA Record Book

11. FOUNDATION (ACADEMIC) STANDARDS ALIGNED**1.0 Academics**

Students understand the academic content required for entry into postsecondary education and employment in the Engineering and Design sector. *(The standards listed below retain in parentheses the numbering as specified in the mathematics, science, history–social science, and visual and performing arts content standards adopted by the State Board of Education.)*

Math

Specific applications of Probability and Statistics standards (grades eight through twelve):

(8.0) Students organize and describe distributions of data by using a number of different methods, including frequency tables, histograms, standard line and bar graphs, stem-and-leaf displays, scatterplots, and box-and-whisker plots.

Algebra I

Specific applications of Algebra I standards (grades eight through twelve):

(10.0) Students add, subtract, multiply, and divide monomials and polynomials. Students solve multistep problems, including word problems, by using these techniques.

(12.0) Students simplify fractions with polynomials in the numerator and denominator by factoring both and reducing them to the lowest terms.

(13.0) Students add, subtract, multiply, and divide rational expressions and functions. Students solve both computationally and conceptually challenging problems by using these techniques.

(15.0) Students apply algebraic techniques to solve rate problems, work problems, and percent mixture problems.

Geometry

Specific applications of Geometry standards (grades eight through twelve):

(8.0) Students know, derive, and solve problems involving the perimeter, circumference, area, volume, lateral area, and surface area of common geometric figures.

(11.0) Students determine how changes in dimensions affect the perimeter, area, and volume of common geometric figures and solids.

(12.0) Students find and use measures of sides and of interior and exterior angles of triangles and polygons to classify figures and solve problems.

2.0 Communications

Students understand the principles of effective oral, written, and multimedia communication in a variety of formats and contexts. *(The standards listed below retain in parentheses the numbering as specified in the English–language arts content standards adopted by the State Board of Education.)*

Reading

Specific applications of Reading Comprehension standards (grades nine and ten):

(2.1) Analyze the structure and format of functional workplace documents, including the graphics and headers, and explain how authors use the features to achieve their purposes.

(2.4) Make warranted and reasonable assertions about the author’s arguments by using elements of the text to defend and clarify interpretations.

Writing

Specific applications of Writing Strategies and Applications standards (grades nine and ten):

(1.1) Establish a controlling impression or coherent thesis that conveys a clear and distinctive perspective on the subject and maintain a consistent tone and focus throughout the piece of writing.

(1.2) Use precise language, action verbs, sensory details, appropriate modifiers, and the active rather than the passive voice.

(2.5) Write business letters:

a. Provide clear and purposeful information and address the intended audience appropriately.

b. Use appropriate vocabulary, tone, and style to take into account the nature of the relationship with, and the knowledge and interests of, the recipients.

c. Highlight central ideas or images.

- d. Follow a conventional style with page formats, fonts, and spacing that contribute to the documents' readability and impact.
- (2.6) Write technical documents (e.g., a manual on rules of behavior for conflict resolution, procedures for conducting a meeting, minutes of a meeting):
- Report information and convey ideas logically and correctly.
 - Offer detailed and accurate specifications.
 - Include scenarios, definitions, and examples to aid comprehension (e.g., troubleshooting guide).
 - Anticipate readers' problems, mistakes, and misunderstandings.
- Specific applications of Writing Strategies and Applications standards (grades eleven and twelve):
- (1.8) Integrate databases, graphics, and spreadsheets into word-processed documents.
- (2.5) Write job applications and résumés:
- Provide clear and purposeful information and address the intended audience appropriately.
 - Use varied levels, patterns, and types of language to achieve intended effects and aid comprehension.
 - Modify the tone to fit the purpose and audience.
 - Follow the conventional style for that type of document (e.g., résumé, memorandum) and use page formats, fonts, and spacing that contribute to the readability and impact of the document.

Written & Oral English Language Conventions

- Specific applications of English Language Conventions standards (grades eleven and twelve):
- Demonstrate control of grammar, diction, and paragraph and sentence structure and an understanding of English usage.
 - Produce legible work that shows accurate spelling and correct punctuation and capitalization.
 - Reflect appropriate manuscript requirements in writing.

Listening & Speaking

- Specific applications of Listening and Speaking Strategies and Applications standards (grades nine and ten):
- (2.3) Apply appropriate interviewing techniques:
- Prepare and ask relevant questions.
 - Make notes of responses.
 - Use language that conveys maturity, sensitivity, and respect.
 - Respond correctly and effectively to questions.
 - Demonstrate knowledge of the subject or organization.
 - Compile and report responses.
 - Evaluate the effectiveness of the interview.
- Specific applications of Listening and Speaking Strategies and Applications standards (grades eleven and twelve):
- (1.8) Use effective and interesting language, including:
- Informal expressions for effect
 - Standard American English for clarity
 - Technical language for specificity

3.0 CAREER PLANNING & MANAGEMENT

Students understand how to make effective decisions, use career information, and manage personal career plans:

- Know the personal qualifications, interests, aptitudes, information, and skills necessary to succeed in careers.
- Understand the scope of career opportunities and know the requirements for education, training, and licensure.
- Develop a career plan that is designed to reflect career interests, pathways, and postsecondary options.
- Understand the role and function of professional organizations, industry associations, and organized labor in a productive society.
- Understand the past, present, and future trends that affect careers, such as technological developments and societal trends, and the resulting need for lifelong learning.
- Know important strategies for self-promotion in the hiring process, such as job applications, résumé writing, interviewing skills, and preparation of a portfolio.

4.0 TECHNOLOGY

Students know how to use contemporary and emerging technological resources in diverse and changing personal, community, and workplace environments:

- 4.1 Understand past, present, and future technological advances as they relate to a chosen pathway.
- 4.2 Understand the use of technological resources to gain access to, manipulate, and produce information, products, and services.
- 4.3 Understand the influence of current and emerging technology on selected segments of the economy.
- 4.4 Understand geographic information systems (G.I.S.).
- 4.5 Determine the validity of the content and evaluate the authenticity, reliability, and bias of electronic and other resources.
- 4.6 Differentiate among, select, and apply appropriate tools and technology.

5.0 PROBLEM SOLVING & CRITICAL THINKING

Students understand how to create alternative solutions by using critical and creative thinking skills, such as logical reasoning, analytical thinking, and problem-solving techniques:

- 5.1 Apply appropriate problem-solving strategies and critical thinking skills to work-related issues and tasks.
- 5.2 Understand the systematic problem-solving models that incorporate input, process, outcome, and feedback components.
- 5.3 Use critical thinking skills to make informed decisions and solve problems.

6.0 HEALTH & SAFETY

Students understand health and safety policies, procedures, regulations, and practices, including the use of equipment and handling of hazardous materials:

- 6.1 Know policies, procedures, and regulations regarding health and safety in the workplace, including employers' and employees' responsibilities.
- 6.2 Understand critical elements of health and safety practices related to storing, cleaning, and maintaining tools, equipment, and supplies.
- 6.3 Understand how to locate important information on a material safety data sheet.
- 6.4 Maintain safe and healthful working conditions.
- 6.5 Use tools and machines safely and appropriately.
- 6.6 Know how to both prevent and respond to accidents in the agricultural industry.

7.0 RESPONSIBILITY & FLEXIBILITY

Students know the behaviors associated with the demonstration of responsibility and flexibility in personal, workplace, and community settings:

- 7.1 Understand the qualities and behaviors that constitute a positive and professional work demeanor.
- 7.2 Understand the importance of accountability and responsibility in fulfilling personal, community, and workplace roles.
- 7.3 Understand the need to adapt to varied roles and responsibilities.
- 7.4 Understand that individual actions can affect the larger community.
- 7.5 Understand the importance of time management to fulfill responsibilities.
- 7.6 Know how to apply high-quality craftsmanship to a product or presentation and continually refine and perfect it.

8.0 ETHICS & LEGAL RESPONSIBILITY

Students understand professional, ethical, and legal behavior consistent with applicable laws, regulations, and organizational norms:

- 8.1 Know the major local, district, state, and federal regulatory agencies and entities that affect the industry and how they enforce laws and regulations.
- 8.2 Understand the concept and application of ethical and legal behavior consistent with workplace standards.
- 8.3 Understand the role of personal integrity and ethical behavior in the workplace.
- 8.4 Understand how to access, analyze, and implement quality assurance information.

9.0 LEADERSHIP & TEAMWORK

Students understand effective leadership styles, key concepts of group dynamics, team and individual decision making, the benefits of workforce diversity, and conflict resolution:

- 9.1 Understand the characteristics and benefits of teamwork, leadership, and citizenship in the school, community, and workplace settings.
- 9.2 Understand the ways in which preprofessional associations, such as the Future Farmers of America (FFA), and

competitive career development activities enhance academic skills, promote career choices, and contribute to employability.

9.3 Understand how to organize and structure work individually and in teams for effective performance and the attainment of goals.

9.4 Know multiple approaches to conflict resolution and their appropriateness for a variety of situations in the workplace.

9.5 Understand how to interact with others in ways that demonstrate respect for individual and cultural differences and for the attitudes and feelings of others.

9.6 Understand leadership, cooperation, collaboration, and effective decision-making skills applied in group or team activities, including the student organization.

10.0 TECHNICAL KNOWLEDGE & SKILLS

10.1 Understand the aims, purposes, history, and structure of the FFA student organization, and know the opportunities it makes available.

10.2 Manage and actively engage in a career-related, supervised agricultural experience.

10.3 Understand the importance of maintaining and completing the California Agricultural Record Book.

10.4 Maintain and troubleshoot equipment used in the agricultural industry.

11.0 DEMONSTRATION & APPLICATION

Students demonstrate and apply the concepts contained in the foundation and pathway standards.

12. B. Agricultural Mechanics Pathway

The Agricultural Mechanics Pathway prepares students for careers related to the construction, operation, and maintenance of equipment used by the agriculture industry.

Basic agricultural mechanics skills and safety, standards B1.0 through B8.0, cover woodworking, electrical systems, plumbing, cold metal work, concrete, and welding technology.

Advanced topics, standards B9.0 through B12.0, deal with metal fabrication, small engines, agriculture power and technology, and agriculture construction.

B1.0 Students understand personal and group safety:

B1.1 Practice the rules for personal and group safety while working in an agricultural mechanics environment.

B1.2 Know the relationship between accepted shop management procedures and a safe working environment.

B1.3 Know how to safely secure loads on a variety of vehicles.

B2.0 Students understand the principles of basic woodworking:

B2.1 Know how to identify common wood products, lumber types, and sizes.

B2.2 Know how to calculate board feet, lumber volume, and square feet.

B2.3 Know how to identify, select, and implement basic fastening systems.

B2.4 Complete a woodworking project, including interpreting a plan, developing a bill of materials and cutting list, selecting materials, shaping, joining, and finishing.

B3.0 Students understand the basic electricity principles and wiring practices commonly used in agriculture:

B3.1 Understand the relationship between voltage, amperage, resistance, and power in single-phase alternating current (AC) circuits.

B3.2 Know how to use proper electrical test equipment for AC and direct current (DC).

B3.3 Analyze and correct basic circuit problems (e.g., open circuits, short circuits, incorrect grounding).

B3.4 Understand proper basic electrical circuit and wiring techniques with nonmetallic cable and conduit as defined by the National Electric Code.

B3.5 Interpret basic agricultural electrical plans.

B4.0 Students understand plumbing system practices commonly used in agriculture:

- B4.1 Know basic plumbing fitting skills with a variety of materials, such as copper, PVC (polyvinyl chloride), steel, polyethylene, and ABS (acrylonitrile butadiene styrene).
- B4.2 Understand the environmental influences on plumbing system choices (e.g., filter systems, water disposal).
- B4.3 Know how various plumbing and irrigation systems are used in agriculture.
- B4.4 Complete a plumbing project, including interpreting a plan, developing a bill of materials and cutting list, selecting materials, joining, and testing.

B5.0 Students understand agricultural cold metal processes:

- B5.1 Know how to identify common metals, sizes, and shapes.
- B5.2 Know basic tool-fitting skills.
- B5.3 Know layout skills.
- B5.4 Know basic cold metal processes (e.g., shearing, cutting, drilling, threading, bending.).
- B5.5 Complete a cold metal project, including interpreting a plan, developing a bill of materials, selecting materials, shaping, fastening, and finishing.

B6.0 Students understand concrete and masonry practices commonly used in agriculture:

- B6.1 Understand how to accurately calculate volume, materials needed, and project costs for a concrete or masonry project.
- B6.2 Know proper bed preparation, concrete forms layout, and construction.
- B6.3 Complete a concrete or masonry project, including developing a bill of materials, assembling, mixing, placing, and finishing.

B7.0 Students understand oxy-fuel cutting and welding:

- B7.1 Understand the role of heat and oxidation in the cutting process.
- B7.2 Know how to properly set up, adjust, shut down, and maintain an oxy-fuel system.
- B7.3 Know how to flame-cut metal with an oxy-fuel cutting torch.
- B7.4 Know how to fusion-weld mild steel with and without filler rod by using oxyfuel equipment.
- B7.5 Know basic repair skills using a variety of techniques, such as brazing or hard surfacing.

B8.0 Students understand electric arc welding processes:

- B8.1 Know how to select, properly adjust, safely employ, and maintain appropriate welding equipment (e.g., gas metal arc welding, shielded metal arc welding, gas tungsten arc welding).
- B8.2 Apply gas metal arc welding, shielded metal arc welding, or flux core arc welding processes to fusion-weld mild steel with appropriate welding electrodes and related equipment.
- B8.3 Weld a variety of joints in various positions.
- B8.4 Know how to read welding symbols and plans, select electrodes, fit-up joints, and control heat and distortion.

B9.0 Students understand advanced metallurgy principles and fabrication techniques:

- B9.1 Understand metallurgy principles, including distortion, hardening, tempering, and annealing.
- B9.2 Operate and maintain various arc welding and cutting systems safely and appropriately.
- B9.3 Operate and maintain fabrication tools and equipment safely and appropriately.
- B9.4 Understand how to design project plans by using mechanical drawing techniques.
- B9.5 Understand how to finish a metal project by implementing proper sequencing.

B9.6 Know how to manipulate and finish metal by using a variety of machines and techniques (e.g., lathe, mill, CNC plasma, shears, press break).

B9.7 Construct a welding project (using any electric welding process, appropriate products, joints, and positions), including interpreting a plan, developing a bill of materials, selecting materials, and developing a clear and concise fabrication contract.

B10.0 Students understand small and compact engines:

B10.1 Understand engine theory for both two- and four-stroke cycle engines.

B10.2 Know different types of small engines and their applications.

B10.3 Know small engine parts and explain the various systems (e.g., fuel, ignition, compression, cooling, lubrication systems).

B10.4 Know how to troubleshoot and solve problems with small engines.

B10.5 Know how to disassemble, inspect, adjust, and reassemble a small engine.

B10.6 Know how to look up parts, apply repair and maintenance recommendations from a repair manual, and complete appropriate forms, including work orders.

B11.0 Students understand the principles and applications of various engines and machinery used in agriculture:

B11.1 Understand how to identify common agricultural machinery.

B11.2 Operate and maintain equipment safely and efficiently.

B11.3 Know the various types of engines found on agricultural machinery and understand the theory and safe operation of their systems (e.g., cooling, electrical, fuel).

B11.4 Know the theory and operation of mobile hydraulic systems and power take-off systems.

B11.5 Troubleshoot common problems with engines and agricultural equipment.

B11.6 Understand the theory and operation of 12-volt DC electronic and electrical systems (e.g., circuit design, starting, charging, and safety circuits).

B12.0 Students understand land measurement and construction techniques commonly used in agriculture:

B12.1 Understand common surveying techniques used in agriculture (e.g., leveling, land measurement, building layout).

B12.2 Know how to draw and interpret architectural plans.

B12.3 Know how to install single- and three-phase wiring and control systems found in agricultural structures, pumps, and irrigation systems.

B12.4 Install plumbing in agricultural structures (e.g., potable water, sewer, irrigation).

B12.5 Form, place, and finish concrete or masonry (e.g., concrete block).

B12.6 Understand how to construct agricultural structures by using wood framing and steel framing systems (e.g., barns, shops, greenhouses, animal structures).

B12.7 Develop clear and concise agricultural construction contracts.

LEGEND FOR REFERENCE OF ACADEMIC STANDARDS

Parenthetical notation preceding the content standard item refers to the grade level for the standard. i.e. (8) refers to grade 8, (9-10) refers to grades 9 & 10.

Example: (8) W2.1 refers to the Eighth Grade Writing Standard Item 2.1

English-Language Arts:

R Reading
W Writing
WOC Written & Oral Conventions
LS Listening & Speaking

Mathematics:

NS Number Sense
AF Algebra & Functions
SDP Statistics, Data Analysis & Probability
MR Mathematical Reasoning
MG Measurement & Geometry
AI Algebra I
G Geometry
AII Algebra II
P&S Probability & Statistics
APP&S Advanced Placement Probability & Statistics
C Calculus

Science:

PH Physics
CH Chemistry
ES Earth Science
I&E Investigation and Experimentation

History-Social Science:

WH World History, Culture and Geography
USH United States History and Geography
AD American Democracy
ECON Economics

Visual and Performing Arts:

APP: Artistic Perception Proficient Level
APA: Artistic Perception Advanced

CEP: Creative Expression Proficient
CEA: Creative Expression Advanced
HCCP: Historical & Cultural Proficient
HCCA: Historical & Cultural Advanced
AVP: Aesthetic Valuing Proficient
AVA: Aesthetic Valuing Advanced
CRP: Connections, Relationships, Proficient
CRA: Connections, Relationships, Advanced

ELA: English-Language Arts with in VPA

ELA- LRA: Literary Response and Analysis
ELA-WSA: Writing Strategies & Applications
ELA-WOELC: Written & Oral English Language Conventions

Sectors

AME Arts, Media and Entertainment
BTC Building Trades and Construction
ECDFS Education, Child Development & Family Services
EU Energy & Utilities
ED Engineering & Design
FID Fashion and Interior Design
FAB Finance and Business
HSMT Health Science & Medical Technology
HTR Hospitality, Tourism & Recreation
IT Information Technology
MPD Manufacturing and Product Development
MSS Marketing, Sales, & Services
PS Public Services
T Transportation