

Agriculture Foundations Certificate of Achievement (CBE Credit)

NARRATIVE

Item 1. Program Goals and Objectives

The Agriculture Foundations Certificate of Achievement prepares students for the agricultural workforce. The certificate provides students with a foundation of knowledge and skills needed in the current agricultural workforce. The courses in this program cover principles of agriculture, agricultural technologies, safety, tools, equipment operation, effective communication, and employability.

PROGRAM LEARNING OUTCOMES

A student who successfully completes this certificate of achievement will be able to:

1. Explain foundational agricultural concepts.
2. Diagnose symptoms and identify related faults with technologies for agricultural processes.
3. Exhibit employability skills, quantitative reasoning, and effective communication within an agricultural context.

Item 2. Catalog Description

Upon successful completion of the Agriculture Foundations certificate program, students will be prepared with foundational knowledge and skills needed for employment in the agricultural workforce. The participants will be able to explain the principles of agriculture, agriculture technologies, and agriculture equipment, read and create agricultural documents, identify safety equipment, safety processes and procedures, and safely work with basic agriculture equipment and tools.

Item 3. Program Requirements – see next page

Requirements	Dept. Name/#	Name	Units	Sequence
Required Core (12 Units)	AG 50	Agriculture Technical Literacy	2.0	Year 1, Semester 1
	OR AG 50A	Agriculture Technical Literacy – Digital Literacy	1.0	
	AND AG 50B	Agriculture Technical Literacy – Applied Technical Reading	0.5	
	AND AG 50C	Agriculture Technical Literacy – Applied Technical Writing	0.5	
	AG 51	Agricultural Systems	3.0	Year 1, Semester 1
	OR AG 51A	Agricultural Systems – General Agriculture Systems Fundamentals	1.0	
	AND AG 51B	Agricultural Systems – Animal Production Systems	1.0	
	AND AG 51C	Agriculture 51C, Agricultural Systems – Crop Production Systems	1.0	
	AG 52	Agricultural Safety	2.0	Year 1, Semester 1
	OR AG 52A	Agricultural Safety – Basic Safety	1.0	
	AND AG 52B	Agricultural Safety – Tool Operation	0.5	
	AND AG 52C	Agricultural Safety – Food Safety	0.5	
	AG 53	Equipment Operation, Configuration & Troubleshooting	3	Year 1, Semester 1
	OR AG 53A	Basic Equipment Operation	1	
	AND AG 53B	Basic Equipment Configuration	0.5	
	AND AG 53C	Basic Equipment Troubleshooting	1.5	
	AG 54	Workplace Effectiveness	2	Year 1, Semester 1
	OR AG 54A	Workplace Effectiveness – Industry Communication	0.5	
	AND AG 54B	Workplace Effectiveness – Employability Skills	1.5	

Total units: 12 units

Clovis Prefix	Clovis #	Title	Credit Equivalents	Competencies
AG	50	Agriculture Technical Literacy	1	Digital Literacy (AG 50A)
			0.5	Applied Technical Reading (AG 50B)
			0.5	Applied Technical Writing (AG 50C)

AG	51	Agricultural Systems	1	General Agriculture Systems Fundamentals (AG 51A)
			1	Animal Production Systems (AG 51B)
			1	Crop Production Systems (AG 51C)
AG	52	Agricultural Safety	0.5	Basic Safety (AG 52A)
			0.5	Tool Operation (AG 52B)
			1	Food Safety (AG 52C)
AG	53	Equipment Operation, Configuration, & Troubleshooting	1	Basic Equipment Operation (AG 53A)
			0.5	Basic Equipment Configuration (AG 53B)
			1.5	Basic Equipment Troubleshooting (AG 53C)
AG	54	Workplace Effectiveness	0.5	Industry Communication (AG 54A)
			1.5	Employability Skills (AG 54B)

- See attached Competency Based Education Curriculum For each course above.

Item 4. Master Planning

This Agriculture Foundations Certificate of Achievement program aligns with the Clovis Community College’s Mission and State Center Community College District’s Master Plan offering access to quality career technical programs. The program will meet annually with an industry-based advisory committee to discuss industry/workplace needs and the enhancement of instructional programs to facilitate those needs. Discussions will focus on specific skill sets desired by employers as well as current industry trends and issues with which students must be familiar upon program completion. The current instructional, library, and student support services will be adequate to meet the needs of this program.

The curriculum for this certificate is based on the requirements from an extensive survey of over 10,000 agricultural workers and their employers. Students of this certificate may apply for technical agricultural employment. All faculty teaching in the program will meet the minimum qualifications.

Item 5. Enrollment and Completer Projections

All courses in the program are new and expected to be offered Fall 2024 or later. The anticipated number of completers is 40. Estimated section offerings and enrollment.

Estimated Enrollment					
Course Department Number	Title	YR1		YR2	
		Annual # Sections	Annual Enrollment Total	Annual # Sections	Annual Enrollment Total
AG 50	Agricultural Technical Literacy	2	40	2	40
AG 51	Agricultural Systems	2	40	2	40
AG 52	Agricultural Safety	2	40	2	40
AG 53	Equipment Operation,	2	40	2	40

Estimated Enrollment					
		YR2		YR2	
	Configuration & Troubleshooting				
AG 54	Workplace Effectiveness	2	40	2	40

Item 6. Career Opportunities and Labor Market Data (Copied this from Merced’s CBE Narrative addendum)

SOC	Description	2022 Jobs	2022 Resident Workers	2022 Net Commuters	2022 Employment Concentration	2022 Regional Completions (2021)	Median Hourly Earnings
11-9013	Farmers, Ranchers, and Other Agricultural Managers	2,810	2,694	116	9.20	54	\$17.20
19-4012	Agricultural Technicians	74	84	(10)	6.75	0	\$16.79
45-2011	Agricultural Inspectors	19	26	(8)	2.34	0	\$21.91
45-2041	Graders and Sorters, Agricultural Products	242	375	(133)	10.77	0	\$15.08
45-2091	Agricultural Equipment Operators	445	459	(14)	12.26	54	\$14.75
45-2099	Agricultural Workers, All Other	578	572	6	14.67	0	\$14.87
49-3041	Farm Equipment Mechanics and Service Technicians	113	117	(4)	5.31	54	\$22.37
49-9041	Industrial Machinery Mechanics	292	300	(8)	1.35	2	\$28.05
51-1011	First-Line Supervisors of Production and Operating Workers	345	433	(88)	0.98	0	\$29.03
51-3099	Food Processing Workers, All Other	192	156	36	6.95	0	\$17.41
		5,111	5,217	(106)			

Exhibit 4. Top occupational titles in job postings for agricultural technology

Occupational Title	Job Postings	% of Job Postings
Quality Control Analysts	208	78%
Agricultural Technicians	34	13%
Food Science Technicians	11	4%
Precision Agriculture Technicians	8	3%
Agricultural Inspectors	3	1%
Life, Physical, and Social Science Technicians, All Other	3	1%

Salaries

Exhibit 5 shows the "Market Salaries" for agricultural technology occupations. These are calculated by Burning Glass using a machine learning model built off of millions of job postings every year. This accounts for adjustments based on locations, industry, skills, experience, education requirements, among other variables.

Exhibit 5. Salaries for agricultural technology occupations

Market Salary Percentile	Salary Amount
10th Percentile	\$28,375
25th Percentile	\$32,953
50th Percentile	\$38,263
75th Percentile	\$47,438
90th Percentile	\$67,249

Item 7. Similar Programs at Other Colleges in Service Area

Program will not have an impact on similar programs being developed at other colleges in the service area due to the distance between colleges and the lack of public transportation between sites.

Estimated time to program completion 1 year