



Pathway: Plant Systems

Plan of Study: Plant Production

Career Goal (O*Net Code): Agricultural Technician (19-4011), Agricultural Crop Farm Managers (11-9011), Biotechnology Technician (19-4021)

Suggested High School Courses

High School	9 th	Core Academic Courses*:	English I, Algebra I, Biology, World Geography, Foreign Language, Health/P.E.	Suggested Electives: Applied Science Hydroponics
		Career Path Courses:	Introduction to Agriculture	
10 th	Core Academic Courses*:	English II, Geometry, Chemistry, World History, Foreign Language II	Suggested Electives: Technology Applications, Geology	
	Career Path Courses:	Animal Science or Agriculture Mechanics or Agriculture Business		
11 th	Core Academic Courses*:	English III, Algebra II/ or other, Physics, U.S. History, P.E.	Suggested Electives: Communications, Speech, Business or Accounting	
	Career Path Courses:	Horticulture		
12 th	Core Academic Courses*:	English IV, Calculus, Botany, Economics/Government, Fine Arts, AP Environmental Science	Suggested Electives: Statistics, Landscape/ Design	
	Career Path Courses:	Animal Science or Agriculture Mechanics or Agriculture Business		

* Default includes CDHE Higher Education Admission Requirements

Secondary to Postsecondary Linkages & Certifications

Recognition for Advanced Learning	Postsecondary Credit Options: Finish coursed by December or graduating year, then Fast Track at Fort Lewis College or other.
	Industry Recognized Certificate(s) or License(s): Certified Crop Applicators License

Postsecondary Education Opportunities	Postsecondary Programs Available in Colorado		Colorado Institutions	Entrance Exams/ Requirements
	Certificate	Lab Tech, Certified Nursery Professional		CCD, ACC, FRCC, CMC
Associate Degree	Applied Science, Biotechnology, Horticulture and Crop Science, Agricultural Business, Farm and Ranch Management		NJC, CCD, ACC, CMC, PPCC, PCC, FRCC	Accuplacer Testing, High School Diploma or GED
Bachelor Degree	Agricultural Engineering, Biotechnology, Agronomy, Entomology, Integrated Pest Management, Plant Science, Weed Science, Soil Science		CSU, Mesa State, Western State College	Higher Education Admission Requirements
Graduate Degree	Agronomy, Epidemiology, Biotechnology, Biological Science, Plant Breeding, Plant Protection, Soil Science, Plant Pathology		CSU, CU DU	GMAT

Cluster Overview: The **Agricultural, Food and Natural Resources** cluster focuses on

careers in the planning, implementation, production, management, processing, and/or marketing of agricultural commodities and services.

Extended Learning Experiences

Curricular Experiences: Colorado FFA Association Agriscience Fair Competition Agriscience Student Competition	Extracurricular Experiences: Intel Math, Science and Engineering Fair CSU Summer Agronomy Camp Farm Bureau Exchange Program
Work-Based Learning Experiences: Career Preparation – Paid and Unpaid, Job Shadowing, Internships	Program Accreditation and/or Professional Association(s): Post Secondary Agricultural Students Association (PAS) American Association of Lab Technicians American Society for Microbiology American Society for Agricultural Engineering American Society of Agronomy Colorado Organic Producers Association
Service Learning Experiences: Colorado FFA, 4-H, Habitat for Humanity, Community Gardens, Landscaping/ Lawn Care, Crop Demonstration Plots, Boy Scouts of America Girl Scouts of America	

Career Options:

Salary Range:

	Career Options:	Salary Range:
Certificate	Laboratory Technician/Assistant, Farmer/Rancher, Pesticide Applicator, Insect Scout	\$
Associate Degree	Biotechnology Technician, Biochemical Technician, Forensic Science Technician, Environmental Technician, Animal Health Tech, Farm/ Ranch Manager, Landscape Technician	\$\$
Bachelor Degree	Biomedical Engineer, Research Associate, Animal Repro Technician, Biotech Production Associate, Certified crop Advisor, Agricultural Researcher, Chemical Salesperson, Cooperative Extension Agent	\$\$-\$\$\$
Graduate Degree	Epidemiologist, Biochemist, Veterinary Scientist, Forensic Scientist, Plant Scientist, Soil Scientist, Plant Breeder, Range Scientist, State Extension Agronomist	\$\$\$-\$\$\$\$

* \$ = \$15-25,000; \$\$ = \$25-55,000; \$\$\$ = \$55-90,000; \$\$\$\$ = Above \$90,000

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