



## 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 <sup>th</sup>	Core Academic Courses*:	English I, Algebra I, Biology, World Geography, Foreign Language, Health/P.E.	Suggested Electives: Applied Science Hydroponics
		Career Path Courses:	Agricultural Sciences I	
10 <sup>th</sup>	Core Academic Courses*:	English II, Geometry, Biology II, World History, Foreign Language II	Suggested Electives: Technology Applications, Geology	
	Career Path Courses:	Agricultural Sciences II		
11 <sup>th</sup>	Core Academic Courses*:	English III, Algebra II/ or other, Chemistry, U.S. History, P.E.	Suggested Electives: Communications, Speech, Business or Accounting	
	Career Path Courses:	Plant Sciences and Crop Production Landscaping/Horticulture I		
12 <sup>th</sup>	Core Academic Courses*:	English IV, Calculus, Economics/Government, Fine Arts, AP Environmental Science	Suggested Electives: Statistics, Landscape/ Design	
	Career Path Courses:	Agricultural Business or Ag Econ 102* Landscaping/Horticulture II		

\* Default includes CDHE Higher Education Admission Requirements

#### Secondary to Postsecondary Linkages & Certifications

Recognition for Advanced Learning	<b>Postsecondary Credit Options:</b> *Dual Enrollment Ag Econ 102 (Transferrable for 2 and 4 year degree path)
	<b>Industry Recognized Certificate(s) or License(s):</b> 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		
<b>Curricular Experiences:</b>	<b>Extracurricular Experiences:</b>	
Colorado FFA Association Agriscience Fair Competition Agriscience Student Competition Agronomy CDE Range Management Floral Design Landscape Design	Intel Math, Science and Engineering Fair CSU Summer Agronomy Camp Farm Bureau Exchange Program	
<b>Work-Based Learning Experiences:</b>	<b>Program Accreditation and/or Professional Association(s):</b>	
Career Preparation – Paid and Unpaid, Job Shadowing, Internships	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	
<b>Service Learning Experiences:</b>		
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:
<b>Certificate</b>	Laboratory Technician/Assistant, Farmer/Rancher, Pesticide Applicator, Insect Scout	\$
<b>Associate Degree</b>	Biotechnology Technician, Biochemical Technician, Forensic Science Technician, Environmental Technician, Animal Health Tech, Farm/ Ranch Manager, Landscape Technician	\$\$
<b>Bachelor Degree</b>	Biomedical Engineer, Research Associate, Animal Repro Technician, Biotech Production Associate, Certified crop Advisor, Agricultural Researcher, Chemical Salesperson, Cooperative Extension Agent	\$\$\$-\$\$\$\$
<b>Graduate Degree</b>	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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