



Pathway: Plant Systems

Plan of Study: Horticulture

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*:	Language Arts 9, Algebra 1, U.S. Government, US Geography, Earth Science, Foreign Language, Health/PE	Suggested Electives: Foundations in Art or other Visual Arts Elective
		Career Path Courses:	Business Foundation, Teen Challenges	
10 th	Core Academic Courses*:	World Lit and Comp, Geometry, World History, Biology, Foreign Language, Humanities,	Suggested Electives: Understanding Diversity in the US, or other Humanities elective; Math in Business; Speech, Visual Arts Elective	
	Career Path Courses:	Design Technology, Drafting, Technology in Business, Intro to Marketing or Marketing 1		
11 th	Core Academic Courses*:	American Lit and Comp, Algebra 2, Chemistry or other physical science, U.S. History ,	Suggested Electives: Accounting, Wage Earning, Living on your Own, Career Experience, Entrepreneurship, Design Technology 2	
	Career Path Courses:	Greenhouse Management 1, Landscape Management 1		
12 th	Core Academic Courses*:	Communications LA 12, Trigonometry, Physical Science Elective, Fine Arts elective, Botany	Suggested Electives: Career Experience, Economics, Marketing 2, Business Law, Peer Tutoring, E-business, Landscape Mgmt, Construction Trades, Computer Information Systems	
	Career Path Courses:	Greenhouse Management 2, Landscape Management 2		

Secondary to Postsecondary Linkages & Certifications

Recognition for Advanced Learning	Postsecondary Credit Options: (Based on existing articulation-Will change Spring 2009) V07 = 3 credits – HLT 210 V08 = 10 credits – HLT 125, HLT 251, HLT 236 V09 = 8 credits – HLT 101, HLT 215, HLT 216 V10 – 7 credits – HLT 115, HLT 226, HLT 216
	Industry Recognized Certificate(s) or License(s): Certified Crop Applicators License, Certified Landscape Technician, CGNA – Colorado Nursery & Greenhouse Association, Master Gardeners, Colorado Pesticide 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		
<p>Curricular Experiences: Colorado FFA Association Agriscience Fair Competition Agriscience Student Competition Future Business Leaders of America DECA, FCCLA, Student Government, SkillsUSA</p>	<p>Extracurricular Experiences: Environmental Club Debate Club Athletics Student Leadership Newspaper Yearbook</p>	
<p>Work-Based Learning Experiences: Career Experience Program Supervised Agricultural Experience Internships Apprenticeships Integrated leadership skills</p>	<p>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 Colorado Nursery and Greenhouse Association Associated Landscape Contractors of Colorado Society of American Florists Rocky Mountain Society of Arboriculture American Rose Society International Council of Botanical Nomenclature Colorado Association of Lawn Care</p>	
<p>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, CSU extension services, SkillsUSA, FBLA, DECA, FCCLA,</p>		
Career Options:		Salary Range:
Certificate	Florist, Greenhouse Nursery Employee, Grounds Maintenance, Customer Service Representative, Outdoor design technician, Parks and Rec, City Foresters, Snow removal, Lawn Care, Entrepreneur	\$19,000 – 30,000
Associate Degree	Weed Mitigator, Plant Breeder, Floral Wholesaler, Nursery Manager, Crop and Soil Supervisor, Land Use Assessor, Golf Course Manager, Irrigation Technician, Sod Grower Technician, Entrepreneur	\$25,000 - \$40,000
Bachelor Degree	Biomedical Engineer, Research Associate, Animal Repro Technician, Biotech Production Associate, Certified crop Advisor, Agricultural Researcher, Chemical Salesperson, Cooperative Extension Agent, Agricultural teacher, Soil Scientist, Sales and Customer Service, Renewable Resource Engineer, Horticulturist, Landscape Architect, Entrepreneur	\$40,000 - \$70,000
Graduate Degree	Epidemiologist, Biochemist, Veterinary Scientist, Forensic Scientist, Plant Scientist, Soil Scientist, Plant Breeder, Range Scientist, State Extension Agronomist, Plant Pathologist, Biotechnology Biotech Engineer, Economic Development Specialist, Researcher, Entrepreneur	\$70,000 - \$120,000

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

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