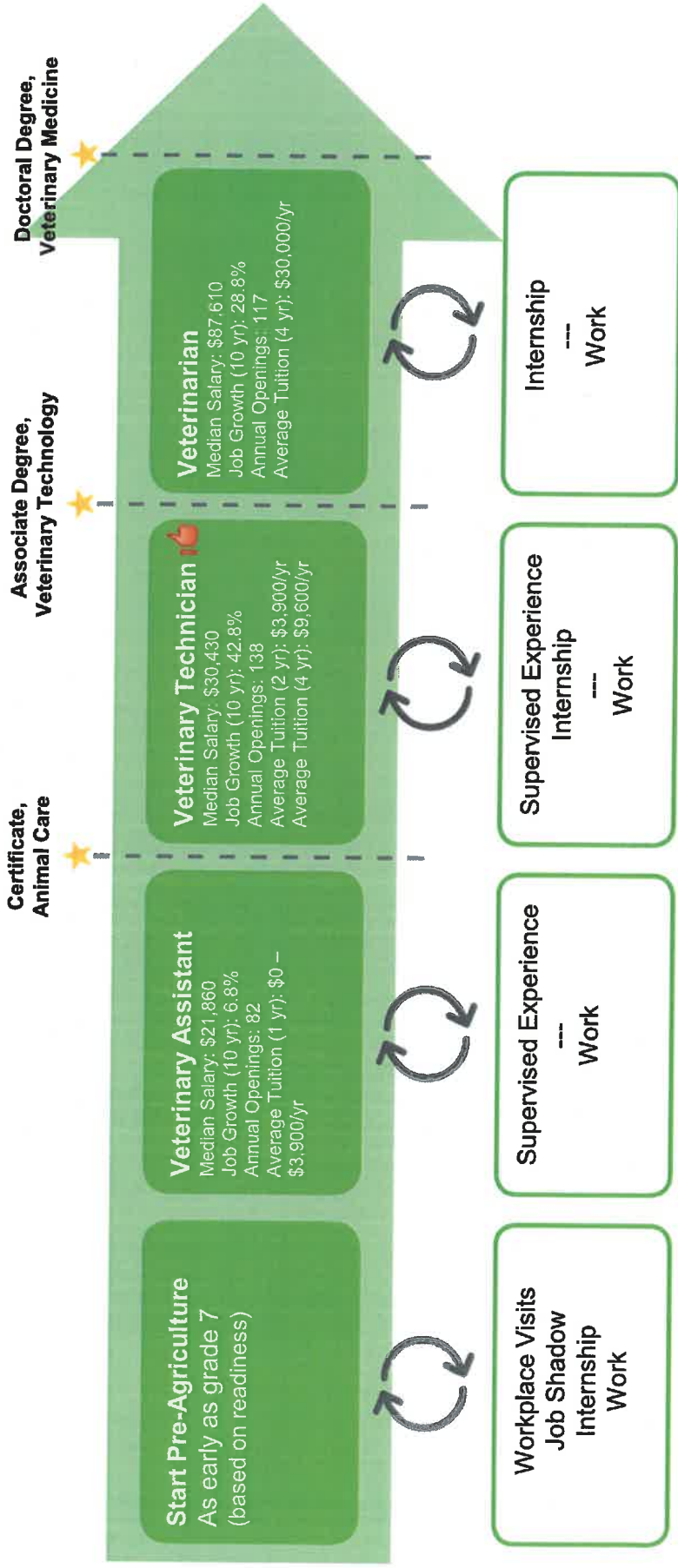


Agriculture and Environmental Systems Career Pathway

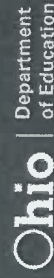


Provided by middle schools, high schools, employers, Ohio Tech Centers, and colleges.

Preparing students for multiple options after high school:
 gainful employment and/or postsecondary study.



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Agriculture and Environmental Systems Career Pathway

Secondary Pathway: Animal Science and Management

Postsecondary Program: Veterinary Technology

An Example of Courses with Secondary and Postsecondary Credits

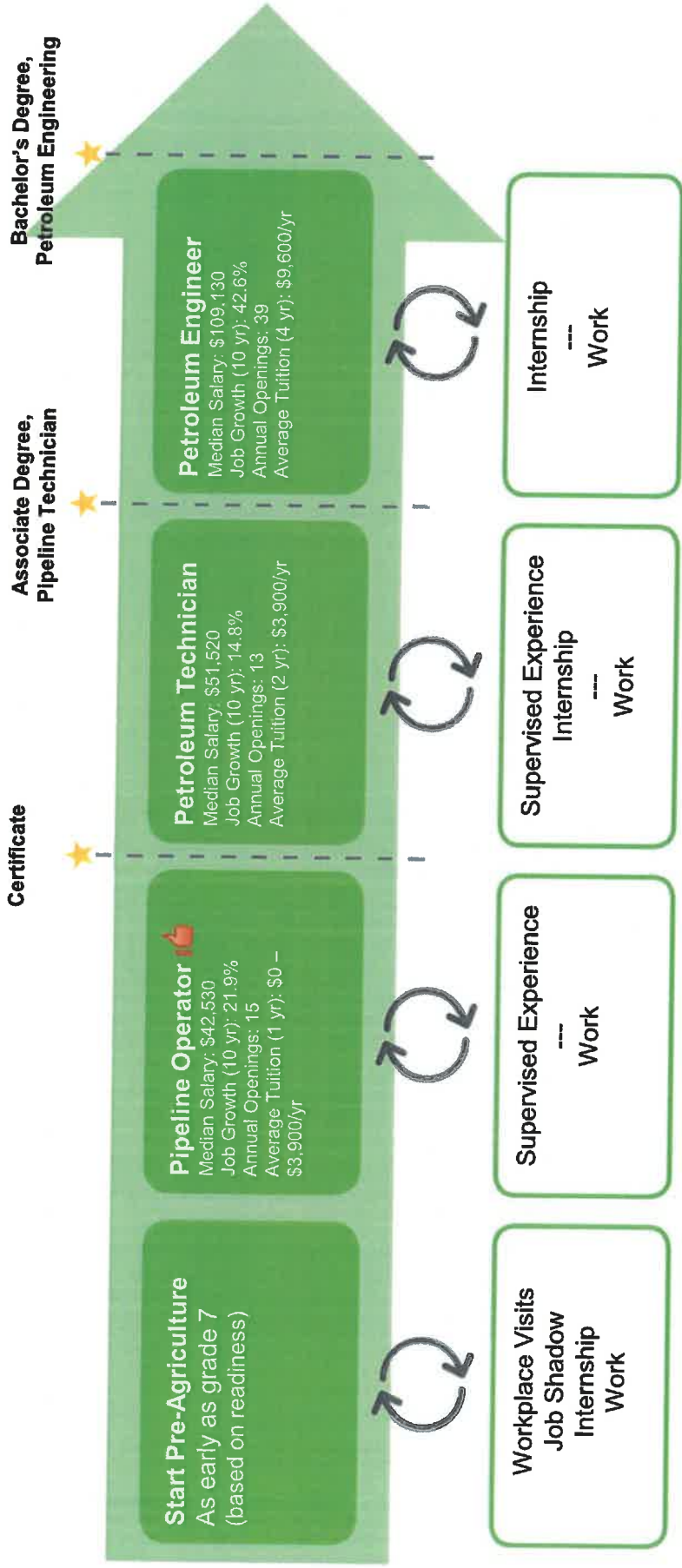
Grade	English I	Algebra I	Physical Science	Social Studies	Fine Arts	Animal Science & Technology	Ag, Food, & Natural Resources
7	English I	Algebra I	Physical Science	Social Studies	Fine Arts	Animal Science & Technology	Ag, Food, & Natural Resources
8	English II	Geometry	Biology	World History	Health (.5) PE (.5)	Animal Selection, Nutrition, & Mgt	World Languages
9	English III	Algebra II	Chemistry	U.S. History	Animal Health	World Languages	
10	English IV	Trigonometry/Calculus	Animal Anatomy & Physiology	U.S. Government	Veterinary Science	A&E Capstone	
11							
12							
Postsecondary							
Year 1 1st Semester	College Seminar	Algebra II	Anatomy & Physiology I	Anatomy & Physiology II	Small Animal Medicine	Veterinary Parasitology	Social Science Elective
Year 1 2nd Semester	Interpersonal Skills	Clinical Pathology I	Veterinary Anatomy & Physiology	Advanced Medical Terminology	Veterinary Radiography	Veterinary Anesthesia	Veterinary Surgical Techniques
Year 2 1st Semester	English Composition I	Ethics	Biochemistry	Veterinary Nutrition	Animal Medicine	Small Animal Health & Disease	Clinical Applications I
Year 2 2nd Semester	Clinical Pathology II	Veterinary Pharmacology	Large Animal Health & Disease	Veterinary Seminar I & II	Veterinary Practicum I & II	Humanities Elective	Clinical Applications II & III

High School Career-Technical Education Program Courses
High School Courses for Postsecondary Credit (Including Apprenticeship Hours) and the Corresponding Postsecondary Courses
Required Courses
Recommended Electives

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Course titles and sequences will vary between schools.

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Agriculture and Environmental Systems Career Pathway



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Ohio In-demand Occupations

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Agriculture and Environmental Systems Career Pathway

Secondary Pathway: Natural Resource Management

Postsecondary Program: Petroleum Technology

An Example of Courses with Secondary and Postsecondary Credits

	7	8	9	10	11	12						
Secondary		English I	Algebra I	Science	Social Studies	Fine Arts	Ag, Food, & Natural Resources					
		English II	Geometry	Biology	World History	Health (.5) PE (.5)	Environmental Science	Natural Resources				World Languages
		English III	Algebra II	Chemistry	U.S. History	Oil & Gas Operations	World Languages					
		English IV	Trigonometry/ Calculus	Physics	U.S. Government	Hydraulics & Pneumatics	Electronic & Electrical Systems					
Postsecondary	Year 1 1st Semester	Interpersonal Communication	Regulations & Compliance	Introduction to Petroleum Industry	Electrical Circuits & Devices	Mechanical Drive Components	Supervisory Control & Data Acquisition					
	Year 1 2nd Semester	Corrosion Basics	Petroleum Instrumentation	Gas Compression & Flow Dynamics	Pipeline Operations	Basic Pumps	Engineering Co-Op					
	Year 2 1st Semester	Physical Geology	College Algebra	College Composition	Chemistry							
	Year 2 2nd Semester	Computer Applications	Physics	Arts & Humanities Elective								

High School Career-Technical Education Program Courses

High School Courses for Postsecondary Credit (Including Apprenticeship Hours) and the Corresponding Postsecondary Courses

Required Courses

Recommended Electives

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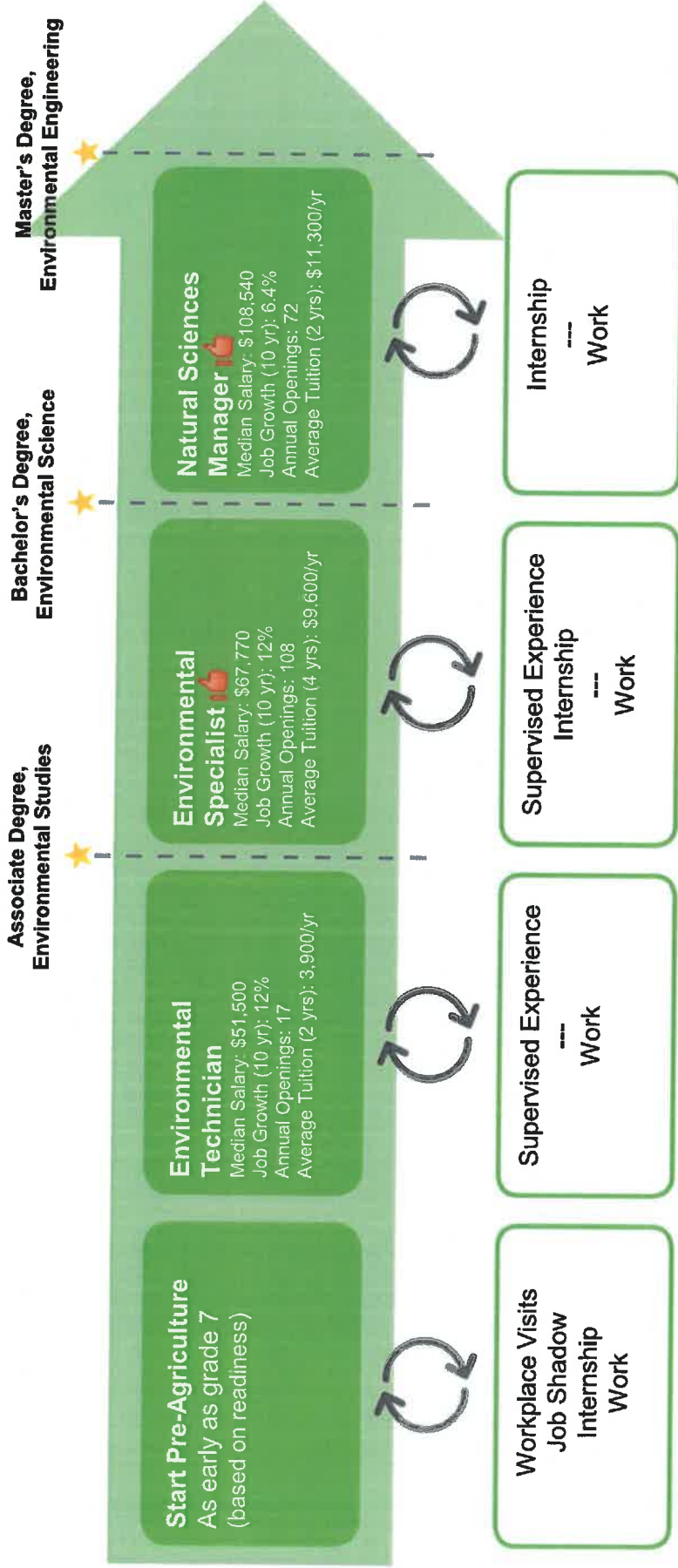
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Agriculture and Environmental Systems Career Pathway

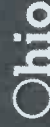


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Agriculture and Environmental Systems Career Pathway

Secondary Pathway: Natural Resource Management

Postsecondary Program: Environmental Science

An Example of Courses with Secondary and Postsecondary Credits

Secondary	7	English I	Algebra I	Physical Science	Social Studies	Fine Arts	Ag. Food, & Natural Resources	Natural Resources
	8	English II	Geometry	Biology	World History	Health (.5) PE (.5)	Environmental Science	World Languages
	9	English III	Algebra II	Chemistry	U.S. History	Environmental Systems Management	Forestry & Woodland Ecosystems	World Languages
	10	English IV	Trigonometry/Calculus	Physics	U.S. Government	Park & Recreational Management	Urban Forestry	
Postsecondary	Year 1 1st Semester	English Composition I	Biology I	College Algebra	Intro to Environmental Science	Environmental Laws & Regulations	Health & Safety for Water Operation	
	Year 1 2nd Semester	Technical Writing	Chemistry I	Physical Geology	Environmental Aspects of Soils	Environmental Site Assessment	Pollution Control	Drinking Water Treatment
	Year 2 1st Semester	Introduction to Psychology	Hazardous Materials Management	Environmental Hydrology	Environmental Sampling	Safety & Loss Prevention	OSHA General Industrial Safety & Health	
	Year 2 2nd Semester	Cultural Anthropology	Environmental Analytical Methods	Applied Environmental Engineering	Air Pollution & Monitoring	Environmental Restoration		

High School Career-Technical Education Program Courses

High School Courses for Postsecondary Credit (Including Apprenticeship Hours) and the Corresponding Postsecondary Courses

Required Courses

Recommended Electives

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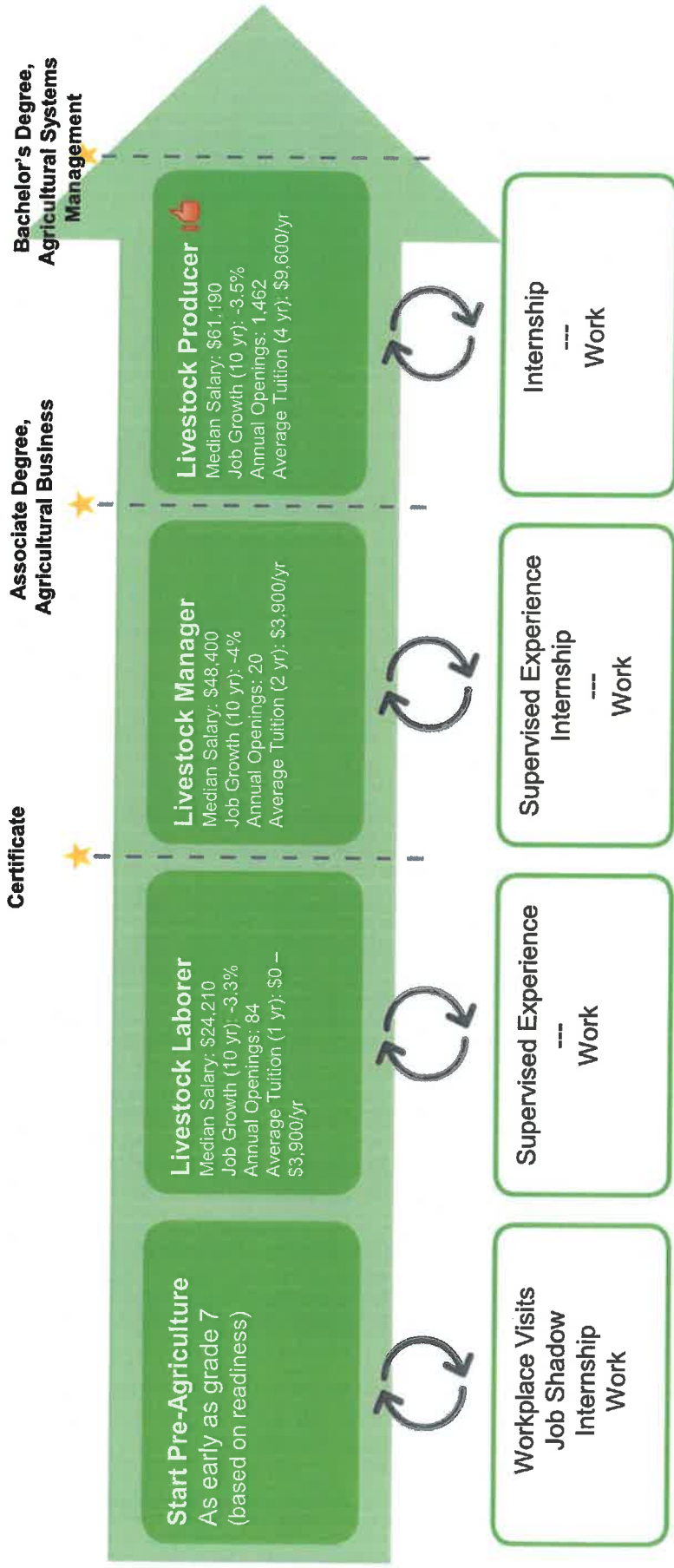
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Agriculture and Environmental Systems Career Pathway

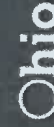


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Agriculture and Environmental Systems Career Pathway

Secondary Pathway: **Animal Science and Management**

Postsecondary Program: **Livestock Management**

An Example of Courses with Secondary and Postsecondary Credits

Secondary	7 8	English I	Algebra I	Physical Science	Social Studies	Fine Arts	Animal & Plant Science	Ag, Food, & Natural Resources
	9 10	English II	Geometry	Biology	World History	Health (.5) PE (.5)	Livestock Selection, Nutrition, & Mgt	World Languages
	11	English III	Algebra II	Chemistry	U.S. History	Animal Health	World Languages	
	12	English IV	Trigonometry/ Calculus	Animal Anatomy & Physiology	U.S. Government	Business Management	A&E Capstone	
Postsecondary	Year 1 1st Semester	Technical Writing	Technical Math	Biology	Computer Applications	Introduction to Animal Production	Livestock Operations Management	
	Year 1 2nd Semester	Economics	Humanities Elective	Animal Anatomy & Physiology	Reproductive Management	Livestock Health	Livestock Selection & Evaluation	Agri-Business Co-Op Experience
	Year 2 1st Semester	Business Communication	Social Science Elective	Records & Analysis	Operations Leadership	Animal Nutrition	Manure Management	Elective
	Year 2 2nd Semester	Reproduction & Marketing Leadership	Livestock Genetics	Small Animal Production	Ruminant Nutrition	Farm Business Management	Elective	

High School Career-Technical Education Program Courses
High School Courses for Postsecondary Credit (Including Apprenticeship Hours) and the Corresponding Postsecondary Courses
Required Courses
Recommended Electives

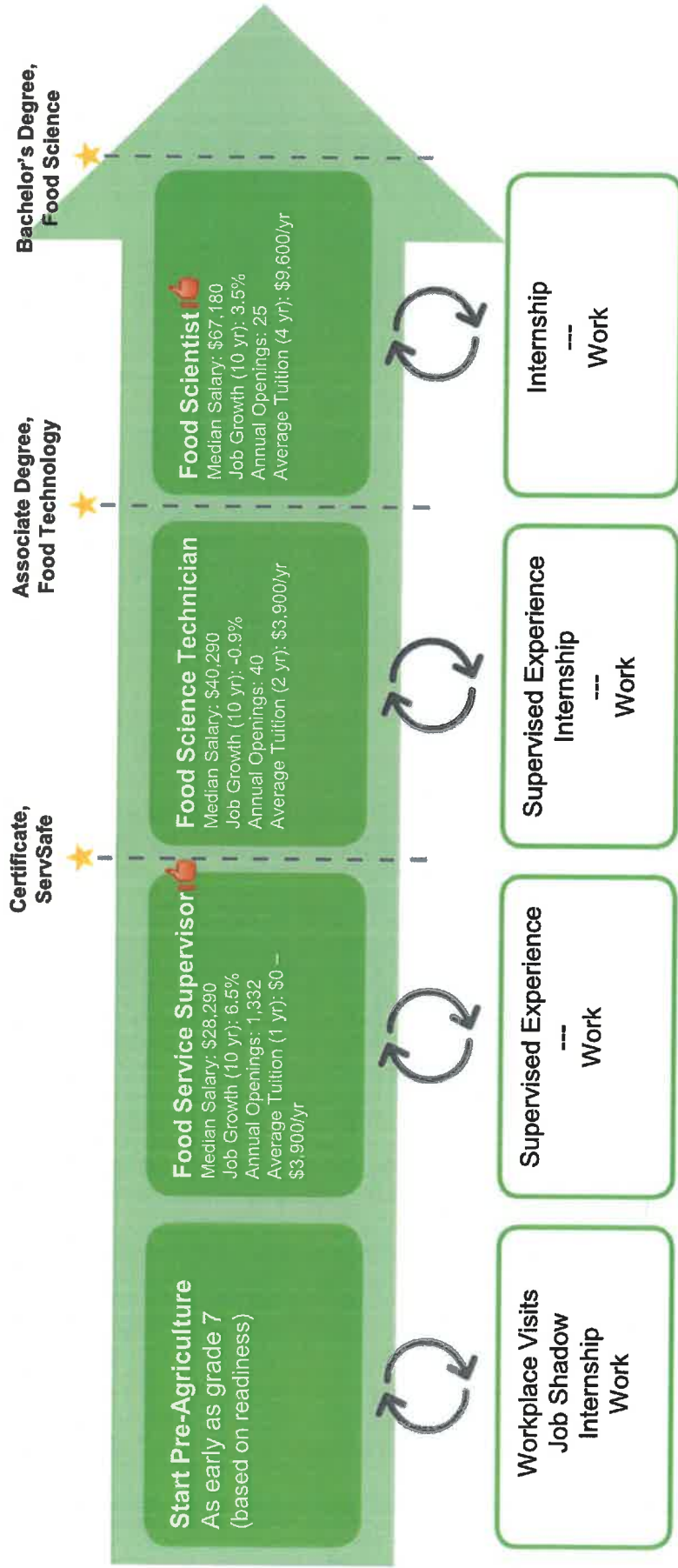
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Agriculture and Environmental Systems Career Pathway



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Agriculture and Environmental Systems Career Pathway

Secondary Pathway: Food Science and Technology

Postsecondary Program: Food Science and Technology

An Example of Courses with Secondary and Postsecondary Credits

	English I	Algebra I	Physical Science	Social Studies	Fine Arts	Science and Technology of Food	Ag, Food, & Natural Resources	
7 8	English I	Algebra I	Physical Science	Social Studies	Fine Arts	Science and Technology of Food	Ag, Food, & Natural Resources	
9 10	English II	Geometry	Biology	World History	Health (.5) PE (.5)	Applications of Food Science & Safety	Principles & Practices of Bioscience	World Languages
11	English III	Algebra II	Chemistry	U.S. History	Meat Science/ Genetics	World Languages		
12	English IV	Trigonometry/ Calculus	Anatomy & Physiology	U.S. Government	Food Marketing & Research	A&E Capstone	Agriculture Communication & Leadership	
Year 1 1st Semester	English Composition	Intro to Food Science	Chemistry I	Human Nutrition				
Year 1 2nd Semester	Public Speaking	Food Safety	Chemistry II	Biology I	Food Regulations			
Year 2 1st Semester	Ethics	Technical Math	Advanced Food Science	Microbiology	Sensory Evaluation	Seminar		
Year 2 2nd Semester	Product Development	HACCP Safety Training	Food Chemistry	Product Processing	Food Production			

High School Career-Technical Education Program Courses

High School Courses for Postsecondary Credit (Including Apprenticeship Hours) and the Corresponding Postsecondary Courses

Required Courses

Recommended Electives

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