

Program of Study Agriculture & Natural Resources

Students in this pathway explore opportunities in planning, implementing, producing, managing and processing of agricultural and natural commodities and services. This pathway also includes preserving our natural resources and our state and national parks.

Students in this pathway may choose to pursue careers such as animal caretaker, veterinarian, dairy producer, golf course manager, botanist, tree surgeon, chemical engineer, recycling technician, or environmental engineer.

A program of study is a document that can be used to outline possible opportunities and experiences that students may wish to take advantage of. As students select experiences, they may wish to get a broad overview of a pathway or they may wish to deepen their approach through the pathway by including a variety of opportunities to engage in work-based learning, project-based learning, industry certifications, and early college courses that will truly prepare a student for the next steps into a career after graduation from Destinations Career Academy.

Tier 1 Introductory

- Agriculture Exploration (PBL)
- Microsoft Office 1 – Word & PowerPoint (IRC/PBL)

Tier 2 Intermediate

- Interpersonal Communication (PBL)
- Animal Systems**
 - Animal Science I (ES)
 - Vet Science (Sci Credit)
- Agribusiness Systems**
 - Agribusiness (PBL)
 - Applied Engineering (ES)
- Environmental & Natural Resources**
 - Wildlife Management 1 (ES)
- Food Products & Plant Systems**
 - Plant Science (NEW)
 - Food Production
 - Food Science (Sci Credit)

Tier 3 Capstone

Animal Systems

- Animal Science II (ES)

Environmental & Natural Resources

- Forestry & Natural Resources
- Green Design & Technology (ES)
- Environmental Science (Science Credit)

Food Products & Plant Systems

- *Food Technology**



Program of Study Courses

If you are interested in pursuing a college degree, career, or apprenticeship in this pathway or a related field, you should consider taking one or more of the following courses in high school:

- Chemistry
- Engineering Fundamentals
- Introduction to College Reading (ECC)
- Introduction to College Writing (ECC)

Early College Credit Courses

Early College Credit is an opportunity at the high school level for students to earn high school and college credit at the same time. Sometimes these courses are offered at your high school (identified on page 1 with the notation of "ECC"). Other courses are available to students through the Early College Credit or Start College Now Programs while still in high school, for free. These may be offered only on the college or university campus or through virtual options. It is important to connect with the college/university to discuss coursework and opportunities that match your future goals. See your school counselor for applications and/or deadlines.



The following are a few options to consider (be sure to review college programs to determine the right courses for you):

- Written Communication
- Emergency Medical Responder
- Plant Science
- Animal Science
- Math with Business Applications
- Intro to Vet Office Preparations



Industry Recognized Certifications

Earning an industry certification while in high school may allow you to get a job or position in an area of interest to you while still in high school. Many of these types of positions can also increase the hourly wage you may earn due to the knowledge and skills you bring to a role. Industry certifications related to this pathway include (courses where certifications are embedded are highlighted on page one with an "IRC" designation):

- Microsoft Office Specialist – Word, PowerPoint
- Elanco Fundamentals of Animal Science
- ServSafe Food Handler – Level 1
- ServSafe Food Manager

Experiential or Work-based Learning

Experiential or work-based learning opportunities "add depth and meaning to students' education." When paired with opportunities to experience the subject matter firsthand, classroom learning becomes more meaningful and relevant to students. Students then become more engaged and excited about their education and future prospects. Experiential learning ranges from classroom guest speakers, field trips, college visits, etc. Some students may want to deepen their opportunities through work-based volunteer opportunities, service learning, internships (paid or unpaid), or participate in Youth Apprenticeship. You may earn state level and industry recognized certifications in one or more of these areas through this pathway:

- Employability Skills
- Youth Apprenticeship – Agriculture
- Youth Leadership
- State Skills Coop – Agriculture/Agribusiness



Course Descriptions

	Credit	Grade 9	Grade 10	Grade 11	Grade 12	Notes
Agriculture Explorations (PBL)	0.5	X	X	X	X	
Microsoft Office 1 (IRC/ECC/PBL)	0.5	X	X	X	X	
Interpersonal Communication (English Credit)	0.5		X	X	X	
Animal Science I (ES)	0.5	X	X	X	X	
Vet Science (ES)	0.5			X	X	
Agribusiness (PBL)	0.5		X	X	X	ALT Yrs: SY28, SY30
Applied Engineering A/B (ES)	1.0		X	X	X	
Wildlife Management I (ES)	0.5		X	X	X	
Plant Science *NEW*	0.5		X	X	X	ALT Yrs: SY27, SY29
Food Production	0.5		X	X	X	ALT Yrs: SY28, SY30
Food Science (Science Credit)	0.5		X	X	X	
Animal Science II (ES)	0.5			X	X	
Forestry & Natural Resources	0.5			X	X	ALT Yrs: SY27, SY29
Green Design & Technology (ES)	0.5		X	X	X	
Environmental Science (Science Cr)	0.5			X	X	
<i>Food Technology*</i>	0.5			X	X	
Animal Science Certification Prep Course *NEW* (IRC)	0.25			X	X	Short Course
Floral Design	0.25	X	X	X	X	Short Course
Food Manager Certification Prep Course *NEW* (IRC)	0.25	X	X	X	X	Short Course
Landscape Design	0.25	X	X	X	X	Short Course



ECC – courses offering Early College Credits



IRC – courses offering Industry Recognized Certifications



PBL – Project-Based Learning



GC – courses available across pathways and WVA

ES- Equivalent Science

* - Future Offering

Hear from our pathway teachers about the Agriculture and Natural Resources Pathway: [See video here](#)

AGRICULTURE EXPLORATIONS



Course Length: Semester Course

Credit: 0.5 credit

Grades: 9-12

Prerequisite(s): None

Course Description: Get ready to dive into the exciting world of agriculture with this engaging, project-based learning (PBL) course! Students will explore everything from sustainability and animal care to cutting-edge technology and the challenges facing the agriculture industry today. Along the way, they'll learn how agriculture shapes life here in Wisconsin and beyond. Students will use all the knowledge and skills gained to design their very own first-generation farm that's sustainable, profitable, and ready to thrive in the future. Whether you're curious about agriculture careers, passionate about the environment, or just love learning by doing, this class will give you a fresh perspective on the world of agriculture and the opportunities it offers!

MICROSOFT OFFICE 1



Course Length: Semester Course

Credit: 0.5 credit

Grades: 9-12

Prerequisite(s): None

Course Description: Learn essential skills in Microsoft Word, PowerPoint, Outlook, and Excel through hands-on projects and practical applications. They learn to create professional documents, design engaging presentations, manage email and schedules effectively, while using Excel to organize data, perform calculations, and build visual charts. The Microsoft 365 applications learned in this class are valuable and widely used across all career pathways, providing a strong foundation for academic and career success. **Students must have the full suite of Microsoft 365 or its equivalent available for this course.**

Note: Students prepare for and take the Microsoft Office Specialist (MOS) certification exam. This industry-recognized credential demonstrates technical proficiency and strengthens college and career readiness. Dual Credit can be earned after taking both Microsoft Office 1 & 2.

Platform(s): Students in this course will be expected to access multiple "outside" platforms including GMetrix or TestOut Software, Certiport (for certification), to name a few.

INTERPERSONAL COMMUNICATION



Course Length: Semester Course

Credit: 0.5 credit *English Credit*

Grades: 11-12

Prerequisite(s): None

Course Description: In this course, students will pursue a greater understanding and appreciation for cultures of various races, ethnicities, socio-economic classes, and genders by analyzing modern and classic literature. Students will practice using textual references, inferring, and critical thinking. This course continues to focus on applying the three enduring outcomes of: strengthening the ability to read with intent, write with purpose, and speak with clarity.

ANIMAL SCIENCE I (ES)

Course Length: Semester Course

Credit: 0.5 credit

Grades: 10-12

Prerequisite(s): None

Course Description: This course covers basic animal science and livestock industry material as well as current issues in animal agriculture. The course includes information students need to know about livestock and poultry husbandry & management for classroom study and beyond. In this course, students will gain a solid understanding of nutrition, feeding, and reproduction of a variety of livestock species to maintain a productive animal. Students will also explore advancements in animal husbandry & management due to the implementation of cutting-edge technology.

VET SCIENCE

Course Length: Semester Course

Credit: 0.5 *Science Credit*

Recommended Grade Level: 11-12

Course Description: As animals play an increasingly important role in our lives, scientists have sought to learn more about their health and well-being. Looking at animals that live in our homes, on farms, and zoos, this course examines some of the common diseases and treatments for domestic animals, as well as potential careers within this field of study. Students will examine case studies of different animals to diagnose conditions and problem solve potential treatments. This course consists of in-depth online lessons, including extensive animations and collaborative explorations to enhance learning.

AGRIBUSINESS



(Offered again in the 2027-2028 School Year)

Course Length: Semester Course

Credit: 0.5 credit

Grades: 10-12

Prerequisite(s): None

Course Description: This course is a Project Based Learning course (PBL). In this course, students will embark on a journey to create their own agriculture-focused business aimed at addressing a prevalent issue within their community. Through engaging projects, participants will develop essential entrepreneurial skills such as crafting comprehensive business plans, devising effective marketing strategies, and producing compelling advertisements. In this course, students will dive deep into the complexity of consumer habits, gaining valuable insights into market dynamics. Additionally, the class will emphasize the importance of effective communication and equip students with conflict resolution skills essential for a collaborative workplace environment.

APPLIED ENGINEERING A/B (ES)

Course Length: Yearlong

Credit: 1.0

Grades: 10-12

Prerequisite(s): Engineering Explorations or by teacher recommendation

Course Description: Discover how technology has changed the world by pursuing solutions to everyday problems. While using the Scientific Method and the Engineering Design Process, learn how electricity, electronic systems, magnets, and circuits work. Understand the design process and bring your ideas to life. Explore various inventions and solutions that have solved problems across industries. Students will also use the Engineering Design Process and an Engineering Notebook to reverse engineer a product of their choice.

WILDLIFE MANAGEMENT I (ES)

Course Length: Semester

Credit: 0.5

Grades: 10-12

Prerequisite(s): None

Course Description: This course explores wildlife, fisheries, and natural resource management in today's world. Students will embark on a captivating exploration of the intricate relationships between humans and the ecosystem, exploring both the positive and negative aspects of human impact on the natural world. The class will also shed light on the crucial role played by laws and legislation in safeguarding ecosystems and natural resources. By examining environmental protections, students will gain insights into the legal frameworks that help maintain the delicate balance of our planet. Furthermore, the class will empower students with practical knowledge of methods aimed at preventing further habitat destruction and species extinction.

PLANT SCIENCE/BOTANY *NEW*

Course Length: Semester

Credit: 0.5

Grades: 10-12

Prerequisite(s): None

Course Description: – Do you have a green thumb or struggle to keep plants alive? No matter your level of plant expertise, this class is a great fit for those wanting to grow their plant knowledge. Throughout the class, students will dig into the science of plants, learning about their parts and structures, how they grow and function, what’s happening at the cellular level, their life cycle, and the ways they reproduce. Students will engage in interactive activities and hands-on labs designed to bring concepts to life and help make the science of plants tangible.

FOOD PRODUCTION

(Offered again in the 2027-2028 School Year)

Course Length: Semester Course

Credit: 0.5 credit

Grades: 10-12

Prerequisite(s): None

Course Description: This course explores the journey of food from farm to table, providing students with a hands-on understanding of the food processing industry. Students will examine food quality and palatability, dairy production, red meat, seafood, and poultry processing, as well as fruit, nut, and vegetable production. Additionally, the course covers value-added and specialty food production, highlighting industry trends and consumer preferences. Through interactive labs, students will gain firsthand experience in food processing techniques while learning about the economic, environmental, and technological factors that shape the industry. Whether exploring dairy production, butchering techniques, or specialty food development, students will develop a deeper appreciation for the science and skill behind the foods they enjoy. After all, who doesn’t love food?

FOOD SCIENCE *NEW*

Course Length: Semester

Credit: 0.5

Grade Level: 10-12

Prerequisite(s): None

Description: Students will explore the physical, chemical, and biological properties of food components. The course integrates concepts from chemistry, microbiology, and anatomy to explain how food is created, stored, and digested. Laboratory sessions emphasize measuring techniques, product testing, and sensory evaluation. Topics include: composition and structure of foods (proteins, lipids, carbohydrates, water), food chemistry, food microbiology & safety, preservation & processing methods, food additives & labeling, measurements & chemical reactions in food.

ANIMAL SCIENCE II (ES)

Course Length: Semester

Credit: 0.5

Grades: 11-12

Prerequisite(s): Successful completion of Animal Science I

Course Description: – This course explores further into animal anatomy, physiology, reproduction, and genetics, building upon foundational knowledge. Students reflect on management decisions crucial for productivity and profitability in agriculture. Exploring genetics' pivotal role, students learn to effectively leverage genetic principles as a management tool. They develop skills in crafting balanced animal rations and explore cutting-edge reproductive technologies for enhanced efficiency and sustainability in livestock operations. Ultimately, the course deepens understanding of animal science and imparts practical skills vital for further education or careers in agriculture and animal husbandry.

FORESTRY & NATURAL RESOURCES

Course Length: Semester

Credit: 0.5

Grades: 11-12

Prerequisite(s):

Course Description: From providing clean air and habitats for wildlife to supporting the lumber industry and offering countless resources, forests are at the heart of a healthy planet. In this course, students will explore forest ecology, management, and conservation while learning how humans impact these vital ecosystems. We'll dive into topics like sustainable harvesting, forest management techniques (including the use of fire), and the ongoing debate about whether such methods do more harm or good. Students will also examine the role humans play in forest destruction and discover ways we can better manage forests to ensure their health for future generations. Through the lens of ethics, ecology, and industry practices, this course will help students understand the challenges and opportunities in protecting our forests while meeting the demands of the lumber industry.

GREEN DESIGN & TECHNOLOGY

Course Length: Semester

Credit: 0.5

Grades: 10-12

Prerequisite(s): None

Course Description: This course examines the impact of human activities on sustainability while exploring the basic principles and technologies that support sustainable design. Students learn about the potential for emerging energy technologies such as water, wind, and solar power. They find out how today's businesses are adapting to the increased demand for sustainable products and services.

ENVIRONMENTAL SCIENCE (SYNCHRONOUS)

Course Length: Semester

Credit: 0.5

Grade Level: 11-12

Prerequisite(s): None

Description: Environmental Science is an interdisciplinary exploration of the natural world and the complex interactions between humans and the environment. This course introduces students to foundational concepts in ecology, earth systems, biodiversity, energy resources, and environmental change. Through scientific inquiry, case studies, and hands-on activities, students will examine current environmental challenges—including climate change, pollution, land use, and resource management—and evaluate evidence-based strategies for creating sustainable solutions.

ENVIRONMENTAL SCIENCE (FLEXLAB) *NEW*

Course Length: Semester

Credit: 0.5

Grade Level: 11-12

Prerequisite(s): None

Description: Environmental Science is an interdisciplinary exploration of the natural world and the complex interactions between humans and the environment. This course introduces students to foundational concepts in ecology, earth systems, biodiversity, energy resources, and environmental change. Through scientific inquiry, case studies, and hands-on activities, students will examine current environmental challenges—including climate change, pollution, land use, and resource management—and evaluate evidence-based strategies for creating sustainable solutions.

FlexLab Component: This course is offered asynchronously. No live instructional classes will be provided. The teacher will be available for support, as needed. FlexLab courses contain two required components - failure to complete both will result in failure of the course:

- **Online Coursework:** Students will complete coursework independently online with milestones and deadlines built within the course. Course content will include digital lessons, video instruction and lectures, readings, and interactive assignments delivered through our learning management system.
- **Virtual Lab Sessions:** Students will participate in TWO of five lab sessions. Each session will last up to three (3) hours. Labs may include dissections, data collection, chemical reactions, and/or group problem solving. Students will submit lab reports or reflective journals after each lab session.

Short Courses

What is a short course?

Short courses are no-risk, 6 to 9 week asynchronous courses where students can delve into a new topic, prep for an upcoming certification or state test, or try out their hand at a simulation. These courses are pass/fail (but only passing grades will land on a student's transcript). Because they are pass/fail, they will not impact a student's GPA. Each course can only be taken once. Teachers are available for questions, but will not hold regular class times. Check out these course offerings:

ANIMAL SCIENCE CERTIFICATION PREP COURSE

Course Length: Quarter

Credit: 0.25

Grades: 11-12

Prerequisite(s): Animal Science 2 & Vet Science

Description: Is your dream job to work with animals? Are you passionate about animals and excited to take the next step in your learning? Throughout this 9-week course, students will strengthen their prior knowledge while preparing to earn the *Elanco Fundamentals of Animal Science Certification*, a nationally recognized credential, that serves as an excellent resume and career builder. The class prepares students by reviewing key areas of the animal science industry, including animal health, nutrition, reproduction, and general management practices. This short course is the perfect next step for students who want to take their passion for animals to the next level and gain a valuable industry-recognized certificate for their future.

FLORAL DESIGN

Course Length: Quarter

Credit: 0.25

Grade Level: 9-12

Prerequisite(s): None

Description: In this 9-week Floral Design course, students will explore the art of floral arranging while learning essential skills such as design principles, floral techniques, basic tools, and proper flower handling. Students will also gain insight into the business side of floral design, including working with customers, budgeting, and pricing arrangements. They will create their own floral arrangements and develop a deeper appreciation for the creativity and craftsmanship behind the floral industry.

FOOD MANAGER CERTIFICATION PREP COURSE

Course Length: Quarter

Credit: 0.25

Grades: 9-12

Prerequisite(s): None

Description: This 9-week short course is designed for students who want to advance in the food service industry and earn an important industry credential. The Food Manager Certificate is required for anyone supervising food service employees, making it a valuable step for students pursuing careers in restaurants, catering, or other food-related fields. Throughout the course, students will learn the essentials of safe food handling and storage, preventing cross-contamination, understanding food safety regulations, and maintaining compliance in a professional kitchen. By the end of the course, students will have the opportunity to earn a nationally recognized certificate that demonstrates their expertise, responsibility, and readiness to step into leadership roles in the food service industry.

LANDSCAPE DESIGN

Course Length: Quarter

Credit: 0.25

Grade Level: 9-12

Prerequisite(s): None

Description: This 9-week short course in Landscape Design offers students an introduction to the art and science of creating beautiful, functional outdoor spaces. Students will explore the fundamentals of landscape design, including career opportunities within the industry. The course covers the identification of various plants and hardscapes, along with their respective symbols used in professional design plans. Students will gain practical skills in using scales and essential tools of the trade. Emphasis will be placed on understanding customer needs, working within budgets, and applying core design principles to create appealing designs. By the end of the course, students will demonstrate their knowledge and skills to develop their own unique landscape design, showcase their ability to bring a client's vision to life.