



**Express Transfer Agreement (ETA) with
Sheridan College**

Sheridan College Plant Sciences, A.S. Requirements:

First Year at Sheridan College: Fall Semester – 15 Credits

Course Name	Credits	UW Notes
BIOL 1010 - General Biology I	4	PN
ENGL 1010 - English Composition I with a C or better	3	C1
HORT 2025 – Horticultural Science	4	
MATH 1400 – College Algebra	4	Q

First Year at Sheridan College: Spring Semester – 15 Credits

Course Name	Credits	UW Notes
BIOL 2023 - Plant and Fungal Biology	4	
CHEM 1000 Intro to Chemistry OR CHEM 1020 General Chemistry	4	PN
HORT 2010 – Greenhouse Management OR HORT 2400 – Plant Propagation	3	
STAT 2050 - Fundamentals of Statistics	4	Q

Second Year at Sheridan College: Fall Semester – 14-15 Credits

Course Name	Credits	UW Notes
AECL 1000 – Agroecology OR BIOL 2400 Ecology AND BIOL 2410 Field Ecology lab	4	PN
AGEC 1010 Agricultural Macroeconomics OR AGEC 1020 Agricultural Microeconomics	3	H
AW 0000 – Advanced Writing	3	C2
SOIL 2010 Intro to Soil Science	4	

Second Year at Sheridan College: Spring Semester – 15-16 Credits

Course Name	Credits	UW Notes
CHEM 2300 - Intro to Organic Chemistry	4	
CNST 0000 – US & WY Constitutions	3	V
CS 0001 – Cultural Studies other than Social & Behavioral Sciences	3	
GEL 0000 – General Electives	2-3	
PEL 0000 - Program Electives	3	

Total Degree Credit Hours: 60-61

Program Electives – 3 Credits

Course Name	Credits	UW Notes
AECL 0000 – Any course from the AECL department		
AGEC 0000 – Any course from the AGECE department		
ANSC 1010 – Intro to Animal Science	4	Required by UW degree
BIOL 0000 – Any course from the BIOL department		
HORT 0000 – Any course from the HORT department		
MOLB 0000 – Any course from the MOLB department		
REWM 0000 – Any course from the REWM department		



**Express Transfer Agreement (ETA) with
Sheridan College**

Plant Production and Protection, B.S.

The Plant Production and Protection degree prepares students for careers in agriculture, natural resources, environmental and life sciences with a focus on crop and pest management.

Degree Requirements

This degree requires 120 credits, 42 of which are upper-division credits.

University Studies Program

This degree requires that The University Studies Program 2015 requirements are met before graduation. Some of the courses required for this major fulfill USP requirements, but not all. Students should check their degree evaluations and consult with their assigned academic advisor to discuss their specific course plan.

Course Name	Credits	UW Course in Major	AA/AS/AB/ADN satisfies this USP
C 1-Communication 1 (COM1)	3		X
C 2-Communication 2 (COM2)	3		X
C 3-Communication 3 (COM3)	3	(Must be completed at UW)	
Q-Quantitative Reasoning (Q)	3		X
PN-Physical and Natural World (1) (PN)	3		X
PN-Physical and Natural World (2) (PN)	3		X
H-Human Culture (1) (H)	3		X
H-Human Culture (2) (H)	3		X
V-US & WY Constitution (V)	3		X
FYS or USP Elective-Any 3-credit hour of FYS or 3-credit hours of USP electives	3		X

Note: FYS courses have been paused. 3 hours from any additional USP designated courses is still required.

Course Requirements - Core Requirements (required of ALL degree recipients): 50 Hours

Course Name	Credits	Sheridan College	Sequencing
PLNT 1000 - Agroecology PN	4	AECL 1000 - Agroecology	Fall 2 nd Year
LIFE 1010 - General Biology PN	4	BIOL 1010 General Biology I	Fall 1 st Year
CHEM 1000 - Introductory Chemistry PN	4	CHEM 1000 Intro to Chemistry	Spring 1 st Year
MATH 1400 - College Algebra Q	3	MATH 1400 College Algebra	Fall 1 st Year
AGEC 1020 - Principles of Microeconomics H	3	AGEC 1020 Agricultural Microeconomics	Fall 2 nd Year
ANSC 1010 - Introduction to Animal Science OR ENTO 1000 - Insect Biology PN OR ENTO 1001 - Insect Biology PN preferred	3-4	ANSC 1010 - Intro to Animal Science	Students may select as PEL
SOIL 2010 - Introduction to Soil Science	4	SOIL 2010 Intro to Soil Science	Fall 2 nd Year
LIFE 2023 - Biology of Plants and Fungi	4	BIOL 2023 - Plant and Fungal Biology	Spring 1 st Year
CHEM 2300 - Introductory Organic Chemistry	4	CHEM 2300 - Intro to Organic Chemistry	Spring 2 nd Year
STAT 2050 - Fundamentals of Statistics Q OR LIFE 2100 - Intro Research and Analysis Q	4	STAT 2050 - Fundamentals of Statistics	Spring 1 st Year

Course Name	Credits	
PLNT 3030 - Ecology of Plant Protection	3	UW Course
LIFE 3050 - Genetics	4	UW Course

Course Requirements - continued

Course Name	Credits	
PLNT 3000 - Irrigated Agriculture OR SOIL 4140 - Soil Microbiology OR SOIL 4160 - Soil Health and Nutrient Cycling	3-4	UW Course
PLNT 4990 - Plant Sciences Capstone C3	3	UW Course

Practical Experience (must take 6 credit hours from the following): 6 Hours

Course Name	Credits	
PLNT 4820 - Plant Sciences Seminar	1	UW Course
PLNT 4900 - Undergraduate Teaching Practicum	1-2	UW Course
PLNT 4920 - Research Apprenticeship	1-2	UW Course
PLNT 4930 - Internship in Plant Sciences	1-3	UW Course
PLNT 4960 - Plant Sciences Field Studies	2	UW Course
AGRI 4520 - Field Practicum: Extension Work	1-4	UW Course

Plant Sciences Electives: 15 Hours

(Select 15 credit hours from PLNT courses, at least 12 of which are upper division)

Supporting Electives: 9 Hours

Select 9 hours of upper division courses from those with the following course prefixes:

AGEC (Agricultural Economics)

ANSC (Animal Science)

BIOL (Biology)

BOT (Botany)

ENR (Environment and Natural Resources)

ENTO (Entomology)

FDSC (Food Science)

GIST (Geospatial Information Science and Technology)

LIFE (Life Sciences)

MICR (Microbiology)

MOLB (Molecular Biology)

REWM (Rangeland Ecology and Watershed Management)

RMAL (Ranch Management and Agricultural Leadership)

SOIL (Soil Science)

Free Electives: 25 Hours**Remaining credit hours fulfilled by USP requirements: 15 Hours****Optional Concentrations**

Although not required, students may choose to specialize in any of the four optional concentrations below as part of their B.S. in Plant Production and Protection. In order for the concentration to be official, students must “opt in” and add the desired concentration to their degree evaluation.

Agronomy Concentration: 24 Hours

The Agronomy concentration focuses on the intricacies of agronomic crop production along with pest management, genetics, soil science, and other related topics. This is a broad area of study that can be tailored to the student's particular interests. Careers in production, consulting, and pest management abound in the public and private sectors of agriculture. Students learn the ultimate goal of promoting more efficient and sustainable agronomic crop production practices. Skills learned include written and oral communication; sciences such as ecology, chemistry, and genetics; and practical applications such as computer technologies, geographic information systems, soil and water analyses, plant health diagnostics, and general best management practices.

Agronomy Concentration – required

Course Name	Credits	
PLNT 3220 - Plant Pathology	3	UW Course
PLNT 4070 - Weed Science and Technology	4	UW Course
PLNT 4700 - Forage Crop Science	3	UW Course
SOIL 4160 - Soil Health and Nutrient Cycling	3	UW Course
PLNT 2200 - Field Crop Production OR PLNT 4220 - Crop Yield Physiology	3	UW Course

Agronomy Concentration - At least 8 additional credit hours from the following: 8 Hours

Course Name	Credits	
PLNT 3000 - Irrigated Agriculture	3	UW Course
PLNT 3031 - Applied Plant Protection	2	UW Course
PLNT 3300 - Horticultural Plant Propagation	3	UW Course
PLNT 4000 - Plant Disease Control	3	UW Course
PLNT 4020 - Sustainable Agriculture	3	UW Course
PLNT 4050 - Plant Biotechnology	3	UW Course
PLNT 4120 - Organic Food Production	3	UW Course
PLNT 4130 - Applied Remote Sensing	3	UW Course
PLNT 4180 - Greenhouse Crop Production	4	UW Course
PLNT 4470 - Seed Science and Technology	3	UW Course
PLNT 4520 - Plant Breeding	3	UW Course
AGEC 4050 - Agribusiness Marketing	3	UW Course
AGEC 4060 - Agribusiness Management	3	UW Course
SOIL 4100 - Soil Physics	3	UW Course
SOIL 4105 - Soil Physics Laboratory	2	UW Course
SOIL 4120 - Genesis, Morphology and Classification of Soils	4	UW Course
SOIL 4140 - Soil Microbiology	4	UW Course

Agroecology Concentration: 21 Hours

Students in this concentration are trained in the ways plants and associated organisms evolve in response to human-impacted environments, and how agroecosystems may change as a result of plant management. Courses include genetics, plant breeding, agroecology, and crop production along with ecology, soil sciences, and others. This concentration provides excellent preparation for graduate school in plant sciences, and also prepares students for careers in conservation, sustainable agriculture, and crop production.

Agroecology Concentration: - required

Course Name	Credits	Sheridan College	Sequencing
LIFE 3400 - General Ecology	3	BIOL 2400 Ecology	Fall 2 nd Year

Course Name	Credits	
PLNT 4020 - Sustainable Agriculture	3	UW Course
PLNT 4400 - Invasive Plant Ecology	3	UW Course
SOIL 4140 - Soil Microbiology	4	UW Course

Agroecology Concentration: - At least 8 additional credit hours from the following: 8 Hours

Course Name	Credits	
PLNT 3031 - Applied Plant Protection	2	UW Course
PLNT 3220 - Plant Pathology	3	UW Course
PLNT 4070 - Weed Science and Technology	4	UW Course
PLNT 4520 - Plant Breeding	3	UW Course
BOT 3100 - Plants and Civilization	3	UW Course
BOT 3600 - Plant Diversity and Systematics	4	UW Course
BOT 4700 - Vegetation Ecology	4	UW Course
ENTO 4300 - Insect Ecology	3	UW Course
LIFE 3500 - Evolutionary Biology	3	UW Course
SOIL 4540 - Microbial Diversity and Ecology	4	UW Course

Horticulture Concentration: 21 Hours

Students in the Horticulture concentration learn about the various horticultural commodities and growing operations. Choose from classes including greenhouse crop production, plant propagation, seed technology, organic food production, plant breeding, and allied subjects such as irrigation technology and pest management including plant pathology and weed science. Students may be surprised at the number of career opportunities available in horticulture! These include vegetable and small fruit production, greenhouse management, controlled environment crop production, landscape plants and management, new variety breeding and production, and urban tree care, among many others.

Horticulture Concentration: - required

Course Name	Credits	Sheridan College	Sequencing
PLNT 1000 - Agroecology PN	4	AECL 1000 - Agroecology	Fall 2 nd Year

Course Name	Credits	
PLNT 3220 - Plant Pathology	3	UW Course
PLNT 3300 - Horticultural Plant Propagation	3	UW Course
PLNT 4470 - Seed Science and Technology	3	UW Course
PLNT 4180 - Greenhouse Crop Production OR PLNT 4200 - Greenhouse Design and Management	3-4	UW Course

Horticulture Concentration: - At least 6 additional credit hours from the following: 6 Hours

Course Name	Credits	Sheridan College	Sequencing
PLNT 2026 - Horticultural Sciences Laboratory	1	HORT 2025 – Horticultural Science *PLNT 2025 + PLNT 2026 are awarded for HORT 2025	Fall 1 st Year

Course Name	Credits	
PLNT 3000 - Irrigated Agriculture	3	UW Course
PLNT 4050 - Plant Biotechnology	3	UW Course
PLNT 4070 - Weed Science and Technology	4	UW Course
PLNT 4120 - Organic Food Production	3	UW Course
PLNT 4130 - Applied Remote Sensing	3	UW Course
PLNT 4520 - Plant Breeding	3	UW Course

Integrated Pest Management Concentration: 25 Hours

IPM as it is commonly known, melds all aspects of plant pest management under one umbrella. It uses the sciences of plant pathology, entomology, and weed science under the broader plant diagnostics field. The IPM concentration emphasizes understanding pest biology and ecology of the ecosystem as the foundation for making pest management decisions that minimize negative impacts on health and the environment. Students in the IPM concentration will find careers in private consulting, field diagnostics, research and demonstration, and product sales, as well as public sector work in invasive species management.

Integrated Pest Management Concentration: - required

Course Name	Credits	
PLNT 3220 - Plant Pathology	3	UW Course
PLNT 4000 - Plant Disease Control	3	UW Course
PLNT 4070 - Weed Science and Technology	4	UW Course

PLNT 4400 - Invasive Plant Ecology	3	UW Course
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Integrated Pest Management Concentration: - continued

Course Name	Credits	
BOT 3600 - Plant Diversity and Systematics OR BOT 4680 - Taxonomy of Vascular Plants OR ENTO 4684 - Classification of Insects OR REWM 4300 - Grass Taxonomy	3-4	UW Course

Integrated Pest Management Concentration: - At least 9 additional credit hours from the following: 9 Hours

Course Name	Credits	
PLNT 3031 - Applied Plant Protection	2	UW Course
PLNT 4020 - Sustainable Agriculture	3	UW Course
PLNT 4050 - Plant Biotechnology	3	UW Course
PLNT 4120 - Organic Food Production	3	UW Course
PLNT 4130 - Applied Remote Sensing	3	UW Course
PLNT 4470 - Seed Science and Technology	3	UW Course
ENTO 4300 - Insect Ecology	3	UW Course
ENTO 4884 - Insect Behavior	3	UW Course
REWM 4000 - Poisonous Plants and Plant Toxins	3	UW Course

Program Information

The Department of Plant Sciences offers a Bachelor of Science degree in Plant Production and Protection, with four optional concentrations and four minors. Optional concentrations for Plant Production and Protection majors are:

- Agronomy
- Agroecology
- Horticulture
- Integrated Pest Management

Minors available for students pursuing other majors at UW are: Agronomy, Agroecology, Horticulture, and Plant Protection. These minors allow students within many bachelor's programs to obtain an added emphasis in areas that enjoy strong employment opportunities.

A B.S. degree in Plant Production and Protection prepares students for careers in agriculture, natural resources, environmental and life sciences and for advanced graduate studies in specific subdisciplines within these areas. It is a broad, interdisciplinary, undergraduate curriculum that combines and integrates courses in the crop, horticulture, disease, weeds, soil, and insect sciences and is supported by a science-based curriculum and general education.

Flexibility is built into the curriculum to readily accommodate students seeking to pursue an emphasis or obtain a minor in a specific discipline. To that end the breadth of the curriculum is balanced with greater depth in biology, chemistry, crop science, entomology, environmental studies, natural resource management, soil science, plant pathology, weed science, horticulture, turf management, pre-veterinary medicine, rangeland ecology and watershed management, animal science, microbiology, and molecular biology. A liberal number of electives permits design of a program that best meets individual career and educational objectives. The Plant Production and Protection program is well suited for students who possess a strong interest in, and an aptitude for, science, agriculture, the environment, life sciences, or natural resources.

The core curriculum is comprised of freshman- through senior-level courses that illustrate dynamic and complex interactions of plants, soils, and plant pests (diseases, insects, weeds) with the environment. Academic training is enhanced with experiential learning through research apprenticeships, internships, field studies, and a special Plant Sciences Capstone course. Special emphasis is given to development of critical thinking and communication skills, problem solving, and application of science. It is an interdisciplinary and highly practical degree program designed to prepare students for "real world" situations.

Plant Production and Protection B.S. degree recipients are prepared for careers with private and public institutions and agencies in such areas as: agricultural consulting, production or sales, research, product development, education, extension education, international programs, and scientific and technological support. These careers include but are not limited to: soil scientist, conservationist, entomologist, consultant, plant scientist, integrated pest management specialist, ecologist, research associate or technician, agronomist, biotechnician, and

agroecologist. Degree recipients are also prepared for graduate education in biological and environmental sciences.

The combined Plant Sciences, B.S./M.S. QuickStart program enables highly qualified students to be admitted to the M.S. program during the junior year of their B.S. program, and to work thereafter toward both the B.S. and M.S. degrees. Accepted students would earn a B.S. degree in Plant Production and Protection or Rangeland Ecology and Watershed Management, and the M.S. degree in Plant Sciences. Please see additional information under the Plant Sciences Graduate Study section or online at <http://www.uwyo.edu/plantsciences/>.

Notes:

COURSE SUBSTITUTIONS: WyoTAGs reflect published equivalencies. UW academic departments occasionally arrange for course substitutions when indirect equivalencies exist. Please contact your UW Academic Advisor for details.

EFFECTIVE DATE: This document is in effect as of the 2026-2027 catalog year; it reflects the published UW curriculum as of that date. Any changes to the UW curriculum or the WYCC course equivalents will require this document to be updated. To request an updated document, faculty should contact transfer@uwyo.edu via email.