Plant Science and Technology

```
Degree Type: B.S.
Minimum Credits Required: 120
```

University Degree Requirements

For complete details on these and other university degree requirements, refer to the Degree and Graduation Requirements (https://catalog.ndsu.edu/academic-policies/undergraduate-policies/degree-and-graduation/) section in the University Catalog.

1. Minimum of 120 semester credits (some programs may exceed this minimum).
2. Complete the University General Education requirements.
3. Minimum institutional GPA of 2.00 based on work taken at NDSU.
4. Minimum of 30 credits in resident at NDSU.
5. Minimum of 36 upper level credits (courses numbered 300 or higher).
6. Students with transfer credit must meet the NDSU 30 credits in residence (#4). Of these 30 credits in residence, a minimum of 15 credits must be in courses numbered 300 or above, and 15 credits must be in the student's declared major curricula.

University General Education Requirements

A list of university approved general education courses along with the administrative policies governing the requirement and the categories is available

Code	Title	Credits
Category C: Communication		12
Category R: Quantitative Reasoning		3
Category S: Science and Technology		10
Category A: Humanities and Fine Arts		6
Category B: Social and Behavioral Sciences		6
Category W: Wellness		2
Category D: Cultural Diversity		
Category G: Global Perspectives		
Category L: Digital Literacy		
Total Credits		**39**

Major Requirements

Code	Title	Credits
Required Courses for Crop & Weed Sciences		
PLSC 189	Skills for Academic Success	1
BIOL 150 & 150L	General Biology I and General Biology I Laboratory	4
BIOL 151 & 151L	General Biology II and General Biology II Laboratory	4
CHEM 121 & 121L	General Chemistry I and General Chemistry I Laboratory	4
CHEM 122 & 122L	General Chemistry II and General Chemistry II Laboratory	4
ECON 201	Principles of Microeconomics	3
ENT 350	General Entomology	3
PLSC 110	World Food Crops	3
PLSC 215	Weed Identification	1
PLSC 225	Principles of Crop Production	3
PLSC 312	Expanding the Boundaries of Learning with Service	1
PLSC 315 & 315L	Genetics and Genetics Laboratory	4
PLSC 380	Principles of Plant Physiology	3

PLSC 420	Integrated Forage and Cover Crops Production Management and Ecosystem Services [2]	3
PLSC 423	Principles of Weed Science [2]	3
PLSC 455	Cropping Systems:An Integrated Approach [2]	3
PLSC 491	Seminar	1
PPTH 424 & 424L	Fundamental Plant Pathology and Fundamental Plant Pathology Laboratory [2]	3
SOIL 210	Introduction to Soil Science	3
STAT 330	Introductory Statistics	3
Options: Select one from the following four option areas:		
The standard default option for the major is Agronomy. Student wishing to pursue a different option must officially declare that option with the Office of Registration and Records.		16-23
Total Credits		**73-80**

Agronomy Option

For students interested in production agriculture.

Code	Title	Credits
Agronomy Requirements		
BIOL 461	Plant Ecology [2]	3-4
or BIOC 260	Elements of Biochemistry	
or CHEM 240	Survey of Organic Chemistry	
MATH 103	College Algebra (or higher)	3
MICR 202 & 202L	Introductory Microbiology and Introductory Microbiology Lab	3
SOIL 422	Soil Fertility and Fertilizers [2]	3
PLSC 300-400	(No more than 2 credits of co-op allowed) [2]	4
Total Credits		**16-17**

Biotechnology Option

For students interested in the biotechnology industry or pursuing graduate study in crop biotechnology.

Code	Title	Credits
Biotechnology Requirements		
BIOC 460	Foundations of Biochemistry and Molecular Biology I [2]	3
MATH 105	Trigonometry	3-4
or MATH 146	Applied Calculus I	
MICR 350 & 350L	General Microbiology and General Microbiology Lab	5
PLSC 453	Advanced Weed Science [2]	2-3
or PLSC 431	Intermediate Genetics	
PLSC 484	Plant Tissue Culture and Biotechnology [2]	3
Total Credits		**16-18**

Crop Pathology Option

For students interested in protecting agronomic crops from diseases or preparation for Plant Pathology MS.

Code	Title	Credits
Crop Pathology Requirements		
MATH 103	College Algebra	3
MICR 350 & 350L	General Microbiology and General Microbiology Lab	4
PLSC 431	Intermediate Genetics	3
PPTH 435	Principles of Plant Disease Management	1
PPTH 436	Fungicide: Basics, Resistance, and Emerging Trends	1

PPTH 460	Fungal Biology	3
SOIL 422	Soil Fertility and Fertilizers	3
Select two courses from below		2-3
PPTH 437	Practices of Plant Disease Management Research	
PPTH 442	Practical Nematology	
PPTH 443	Greenhouse Inoculation and Phenotyping of Crop Diseases	
PPTH 445	New Science and Technology in Crop Protection	
PPTH 447	Fundamentals of Molecular Techniques in Agriculture	
PPTH 448	Plant Disease Diagnostics and Quantification	
PPTH 457	Landscape Plant Pathology	
PPTH 462	Identification and Management of Non-Soybean Oil and Legume Crop Diseases	
PPTH 463	Identification and Management of Soybean and Corn Diseases	
PPTH 464	Identification and Management of Small Grain Diseases	
Total Credits		**20-21**

Weed Science Option

For students interested in crop consulting, weed management, and plant protection careers or graduate school.

Code	Title	Credits
Weed Science Rquirements		
CHEM 240	Survey of Organic Chemistry	3-4
or BIOC 260	Elements of Biochemistry	
ENT 431	Principles of Insect Pest Management [2]	3
MATH 103	College Algebra (or higher level)	3
MICR 202 & 202L	Introductory Microbiology and Introductory Microbiology Lab	3
PLSC 433	Weed Biology and Ecology [2]	2
PLSC 453	Advanced Weed Science [2]	2
SOIL 422	Soil Fertility and Fertilizers [2]	3
PPTH 462	Identification and Management of Non-Soybean Oil and Legume Crop Diseases [2]	1
PPTH 463	Identification and Management of Soybean and Corn Diseases [2]	1
PPTH 464	Identification and Management of Small Grain Diseases [2]	1
Total Credits		**22-23**

1 PLSC 189 is only required for first-time, first-year students. These are students who have not yet completed a college course as a college student. Student that are not first-time, first-year students that either transfer into the university or change their major are not required to take this requirement.

2 Students who are approved to complete the accelerated program in the Master of Science in Plant Sciences or Plant Pathology are eligible to complete the 600 level course with graduate supervisor approval. Students are allowed to take 15 graduate credits and apply the graduate credit to these undergraduate program requirements. Students are required to complete the Accelerated Degree Student Declaration form and make formal application to the NDSU Graduate School.

Degree Requirements and Notes:

- The major allows no more than 6 credits of cooperative education (co-op) to be counted toward degree requirements.