Plant Sciences

Department Information

- **Department Head:**
  Richard Horsley, Ph.D.
- **Graduate Coordinator:**
  Edward Deckard, Ph.D.
- **Department Location:**
  166 Loftsgard Hall
- **Department Phone:**
  (701) 231-7971
- **Department Web Site:**
  www.ag.ndsu.edu/plantsciences/ (http://www.ag.ndsu.edu/plantsciences/)
- **Application Deadline:**
  International applications must be completed with the Graduate School by October 1 for spring, March 1 for summer, and May 1 for fall. • Domestic applications should completed with the Graduate School at least 2 months prior to the start of classes.
- **Credential Offered:**
  Ph.D., M.S.
- **English Proficiency Requirements:**
  TOEFL iBT 71, IELTS 6; Duolingo 105

Degree Requirements

In the first year, each M.S. or Ph.D. student, in conjunction with their advisor, will form a supervisory committee, create a plan of study that meets disciplinary requirements below as well the goals of the student, and develop a research proposal paper for submission to the department.

Master's Program

The M.S. program requires the completion of at least 30 credits, during which an overall GPA of 3.0 or better must be maintained. The M.S. degree may be earned by either of two options. The Plan A: Thesis Option emphasizes completion of a research project. The Plan B: Comprehensive Study Option requires more course work and instead of conducting research and presenting a thesis, the candidate presents a paper or papers to the supervisory committee, demonstrating ability for scholarly study and written expression.

Candidates working toward either Plan A or Plan B must pass an oral defense, present a public Exit Seminar on the thesis research or comprehensive study, and have their thesis/paper accepted by the Graduate School to complete the degree.

Code	Title	Credits
M.S. Plan A - Thesis Option		**30**
Required Courses		
PLSC 724	Field Design I	3
PLSC 790	Graduate Seminar	1
PLSC 798	Master's Thesis	10
Additional Credits (13 credits must be didactic)**		**16**
Students focusing on Plant Breeding and Genetics must take and earn a B or better in		
PLSC 718	Genetics & Plant Improvement	
PLSC 631	Intermediate Genetics	

Code	Title	Credits
M.S. Plan B - Master's Paper Option		**30**
PLSC 724	Field Design I	3
Additional 600-700 level courses (18 credits must be didactic**)		23
PLSC 790	Graduate Seminar	1
PLSC 797	Master's Paper	3

** Didactic credits are graduate courses numbered 601-689, 691; 700-789, 791; and 800-889, 891.

Doctoral Program

The Ph.D. program requires completion of at least 90 credits, during which time an overall GPA of 3.0 or better must be maintained. A Plant Breeding and Genetics subplan is available for doctoral students wishing to complete specific coursework, as listed below. To become a Ph.D. candidate, students are required to pass preliminary written and oral examinations directed to academic subject matter. Degree completion follows an oral defense of the dissertation, public Exit Seminar, and acceptance of the dissertation by the Graduate School.

Master of Science Doctoral Track

Qualifying M.S. students accepted will be allowed to use 30 credits from their completed Master's degree toward the Ph.D., thereby completing at least 60 Ph.D. graduate credits rather than 90. No undergraduate courses (100-400) may be counted toward a Ph.D. degree.

Bachelor of Science Doctoral Track

Qualifying B.S. students accepted will be required to complete 90 graduate credits toward the Ph.D. degree. No undergraduate courses (100-400) may be counted toward a Ph.D. degree.

All B.S. to Ph.D. track students must create, defend, and submit a manuscript to a scientific journal by the end of their sixth semester (spring/fall). This manuscript may be used as a chapter in the dissertation.

Code	Title	Credits
M.S. (thesis option) to Ph.D.		**60**
Required Courses		
PLSC 724	Field Design I (if not part of M.S. Must earn B or better)	3
PLSC 790	Graduate Seminar	2
PLSC 892	Graduate Teaching Experience	2
PLSC 899	Doctoral Dissertation	20
Additional didactic credits ** (12 credits must be 700-level)		**24**
Students focusing on Plant Breeding and Genetics must take and earn a B or better in		
PLSC 611	Genomics	
PLSC 631	Intermediate Genetics	
PLSC 718	Genetics & Plant Improvement	
Additional credits		**9**

Code	Title	Credits
M.S. (thesis option) to Ph.D. - Plant Breeding and Genetics Option		**60**
600 - 800 level graduate courses including:		36
PLSC 611	Genomics	
PLSC 631	Intermediate Genetics	
PLSC 718	Genetics & Plant Improvement	
PLSC 724	Field Design I (if not part of master's degree)	
PLSC 731	Plant Molecular Genetics	
PLSC 751	Advanced Plant Genetics	
PLSC 776	Advanced Plant Breeding	
PLSC 782	Population and Quantitative Genetics	
PLSC 790	Graduate Seminar	2
PLSC 892	Graduate Teaching Experience	2
PLSC 899	Doctoral Dissertation	20

** Didactic credits are graduate courses numbered 601-689, 691; 700-789, 791; and 800-889, 891.