

DEPARTMENT OF PLANT & SOIL SCIENCES

GRADUATE STUDIES POLICY as of July 2024

PART I. PROGRAM HISTORY

A. STATEMENT OF PURPOSE

The overall goals of the graduate programs in Plant and Soil Sciences are to achieve a national and international reputation for research excellence and to make important contributions to the educational mission of the University. Focal areas in the Department include:

- Plant Biology and Biotechnology
- Environmental Soil Science
- Plant Pathology
- Crop Production and Weed Science
- Landscape Architecture/Horticulture

Our programs have an excellent record of placing graduates in academia, research institutes, governmental departments, private industry, consulting firms, public and private gardens, and small businesses. Many of our graduates, particularly in the landscape disciplines, contribute to local economies by being self-employed in their area(s) of expertise.

B. DATE OF PERMANENT STATUS

The Department of Plant and Soil Sciences (renamed from the Plant Science Department in 1990) received permanent approval from the University of Delaware Board of Trustees to award the:

- Master of Science degree (M.S.) in Plant and Soil Sciences on July 7, 1958,
- Doctor of Philosophy degree (Ph.D.) in Plant and Soil Sciences on December 7, 1968,
and
- Non-thesis Master's of Plant and Soil Sciences in September 1996.

The Department Chairperson is responsible for administering these degree programs.

C. DEGREES OFFERED

Our department offers the Master of Science and the Doctor of Philosophy degrees in the plant and soil sciences. Two graduate areas exist in the department, namely:

- **Plant Science** (M.S. thesis, M.S. non-thesis, Ph.D.) with course work and thesis research in plant molecular biology, plant breeding, plant pathology, plant phenomics, plant-rhizosphere interactions, horticulture, crop science, plant physiology, plant ecology, and/or urban/regional design and planning
- **Soil Science** (M.S. thesis, M.S. non-thesis, Ph.D.) with course work and thesis research in soil chemistry, soil fertility and management, soil physics, soil microbiology and biochemistry, environmental microbiology, soil and water quality, and/or soil formation and biogeochemistry.

PART II. ADMISSION

A. ADMISSION REQUIREMENTS

Admission to the graduate program is competitive. Those who meet the stated requirements are not guaranteed admission, nor are those who fail to meet all of those requirements necessarily precluded from admission if they offer other appropriate strengths.

Admission to the graduate program in Plant and Soil Sciences is dependent upon the applicant's success in identifying a potential advisor who conducts research in the applicant's area of interest and who also has financial resources sufficient to fund a research project. Applications are evaluated only when an advisor specifically requests that the student's application be reviewed. Ideally, students may contact advisors directly to pursue study in their laboratories.

Graduate students may also apply to the department, and advisors will examine the applicant pool to select students whom they are interested in advising. A financial/research arrangement is then made between an advisor and a student contingent upon student acceptance by the Department Graduate Committee. It is recommended that applicants contact faculty and apply well in advance of applicable deadlines, to increase the likelihood of obtaining a position in their area(s) of interest.

To officially apply for admission, see [Graduate Admissions at UD](#) for detailed instructions, web-based forms, and contact information. Documents required for departmental review include:

- Statement of research interest(s), including an identification of the PLSC faculty member(s) from whom the applicant has obtained an informal commitment of support or whom the applicant feels could best serve their interests;

- Resume;
- Official transcripts of all undergraduate and graduate studies (minimum 2.5/4.0 cumulative and 3.0/4.0 within major; recommended minimum 3.0/4.0 cumulative and 3.5/4.0 within major);
- Three letters of recommendation from individuals knowledgeable of the applicant's academic preparation and potential ability as a graduate student; and
- Results of the Test of English as a Foreign Language (TOEFL) (minimum 213 computer test, or 79 IBT) for international students who have not previously received a degree from a college or university within the United States. Alternatively, the Department is provisionally accepting results from the International English Language Testing System (IELTS) (minimum 6.5 overall with no individual sub-score below 6.0).

The values stated above for GPA are not absolute, provided the applicant can provide evidence of excellence in the other requirements or has desirable qualities that bear directly on the position being considered. Favorable qualifications would include, but are not limited to, undergraduate research experience, exceptional letters of reference, clear evidence of high motivation for the degree, and strong support from the proposed advisor.

The Graduate College has additional requirements not listed above. Photocopied scores are not acceptable for admission but may be used during the initial stages of finding an advisor. Contact the current Graduate Studies Coordinator (see [Program Admission Requirements](#)) with questions concerning specific Departmental requirements.

B. PRIOR DEGREE REQUIREMENTS

- Applicants for the Ph.D. degree must have received at least one undergraduate degree with or without a subsequent M.S. degree.
- Applicants for the M.S. degree (thesis and non-thesis) must have at least one undergraduate degree.

Since the Departmental focal areas are diverse, the degree requirements are tailored to the subject of interest. For example, a strong background in the sciences and possibly math will generally be viewed favorably for applicants interested in one of the Department's science-oriented disciplines within Soil Science or Plant Science.

C. APPLICATION DEADLINES

The official application deadlines are:

Fall semester matriculation: **December 15** for priority funding consideration; **March 15** for consideration for remaining open positions. Under special circumstances, applications may be considered until July 1.

Spring semester matriculation: **September 1** for priority funding consideration; **November 15** for consideration for remaining open positions. Under special circumstances, applications may be considered until December 15.

Summer semester matriculation: **January 1** for priority funding consideration; **March 15** for consideration for remaining open positions. Under special circumstances, applications may be considered until April 15.

There is no special deadline to request admission with financial support, as **it is the Department's policy not to accept a graduate applicant unless funding is available** or provided by the applicant. However, applying early may increase chances that a desired position is still available.

The Department's faculty and corresponding research interests can be found on the Departmental website.

D. SPECIAL COMPETENCIES NEEDED

None.

E. ADMISSION CATEGORIES

Students are accepted in the following degree programs:

- M.S. – Master of Science (thesis) in Plant and Soil Sciences
- M.S. – Master of Science (non-thesis) in Plant and Soil Sciences
- Ph.D. – Doctor of Philosophy in Plant and Soil Sciences

Part-time students

In some circumstances it is possible to pursue a degree on a part-time basis. However financial aid from the Department will not be provided to students in this category.

Provisionally-accepted students

Full and part time students may be admitted to the program with provisional status if there are deficiencies in their academic backgrounds, as determined by the Department. Deficiencies typically include an inadequate academic background, particularly a lack of

appropriate course work in the major area and are usually remedied by satisfactory performance in a course(s) in the deficient area. A letter of provisional admission will indicate specific area(s) of academic deficiency, and the time limits for satisfactory completion of course(s) needed to make up deficiencies. Satisfactory completion of the stipulations in the letter of provisional admission will result in a change of status from provisional to regular student status. The student's advisor and the Department Chairperson will inform the student and the Graduate College of the change in status. Students who do not complete the remedial training in the stipulated time may be expelled from the program.

F. OTHER DOCUMENTS REQUIRED

None.

PART III. ACADEMIC PROCEDURES

A. DEGREE REQUIREMENTS

1. COURSE REQUIREMENTS

Core Requirements (Mandatory for all Plant and Soil Sciences graduate students of all degree types)

- Professional Development: PLSC 802 (1 credit hour); one time during degree
- Seminar Series: PLSC 865 (1 credit hour) or equivalent seminar series related to student's degree; Ph.D. students must take for credit at least two semesters during degree and M.S students must take for credit one or more semesters during degree, which will also count as fixed credits in PLSC. Seminar may be taken additional times, towards overall credit (but not fixed credit).
- Research Ethics: This requirement can be met by Professional Development (PLSC 802), or a class such as PHIL 667/UNIV 604 "Research Ethics" (3 credit hours; 1 semester/degree). The latter additional research ethics class is not a requirement, but it is strongly recommended in order to provide students with more exposure to issues encompassed by research ethics.

Credit Hours

Please see “Core Requirements – all degree types” above for additional required courses. **Students must meet with their advisors and have their plan-of-study approved each semester.**

<p>M.S. (thesis option)</p>	<p>The minimum number of credits required is 30 credit hours. A minimum of 18 credit hours must consist of fixed-credit courses, and at least 12 of these must be from courses offered by the Department of Plant and Soil Sciences. Of the remaining 12 credit hours of the 30 credit minimum, 6 must be for thesis (PLSC 869) with the balance consisting of a maximum of 6 credit hours of research (PLSC 868) and/or independent study (PLSC 666/866). Additional courses must be approved by the student’s advisory committee.</p>
<p>M.S. (non-thesis option)</p>	<p>The minimum number of credits required is 30 credit hours. A minimum of 24 credit hours must consist of fixed-credit courses, and at least 12 of these must be from courses offered by the Department of Plant and Soil Sciences. Students in this program are additionally required to conduct an independent study project (PLSC 666/866) and to present its results in a departmental seminar. Credit hours for PLSC 666/866 cannot be applied to the 12 credit hour minimum. An individualized plan of study is developed by the student in consultation with the student's graduate advisory committee.</p>
<p>Ph.D.</p>	<p>The minimum number of credits required is 12 credit hours; 1 credit hour of PLSC 802, 2 credit hours of PLSC 865 and 9 credit hours of PLSC 969. Degrees will be earned by scientific knowledge, skills and competence achieved. It is the responsibility of the student, major advisor, and committee members to construct an effective program of study and research that will achieve these goals.</p>

2. NON-REGISTERED REQUIREMENTS

Seminar Attendance

Graduate student participation in the seminar series is a crucial and integral part of the graduate education process. Students benefit by being exposed to new and different areas of science, meeting and interacting with renowned scientists and observing many different and effective methods of presentations. In addition, senior graduates benefit from presenting their final research seminar (exit seminar) in front of their peers and faculty. This allows for a more professional setting for the presentation and affords an opportunity for the student's peers and departmental faculty to participate. In some instances, this may be the only opportunity for many faculty and graduate students to observe a specific student in a professional setting. It further presents an opportunity for the entire department to learn more about the research being conducted throughout the department.

All graduate students (M.S. and Ph.D.) are encouraged to attend Departmental seminars (including those presented at the Delaware Biotechnology Institute or other University institutes, if appropriate) or a similar series to help advance them towards their degrees. This is in addition to the seminar classes taken as part of the core degree requirements described above (PLSC865). Registering for the seminar course each semester is encouraged, though not required. Once registered, attendance at these seminars is mandatory. Attendance in the PLSC departmental seminar will be monitored. If a registered student is unable to attend a specific seminar, he/she should notify the seminar coordinator prior to that date. It is at the discretion of the coordinator to excuse absences.

Graduate Student Teaching Experience

Communication skills are an important asset to all professionals in the fields of plant and soil sciences as well as teaching and extension professionals. Students can develop their oral communication skills by the presentation of seminars and research papers; however, exposure to other aspects of communication is also needed. The primary objectives of the teaching/communication activity are to provide students with a meaningful experience and to enhance their ability to compete in the job market.

To this end, students funded with a research assistantship are required to participate in an approved teaching/communications project; this requirement does not apply to students funded with a teaching assistantship. Master's and 3-year Ph.D. students (those Ph.D. students already possessing a master's degree) are required to complete one teaching/communication project; 5-year Ph.D. students (those not possessing a master's degree) are required to complete two projects. If circumstances dictate, the student's advisor may waive the teaching/communication project requirement, in which case the advisor should notify the Graduate College of this decision.

Normally, this communication project will consist of teaching or participation in a classroom setting. In recognition of the diverse backgrounds of students and their personal needs, including degree of English proficiency, alternative experiences to fulfill this requirement may include but are not limited to:

- guest lecturing
- design one or more lab experiments for a course
- design and develop teaching aids, such as image collections, audiovisual packages, etc., for classroom use or use outside the classroom (e.g., extension agent education)
- instructing fellow students in particular skills (e.g., photographic techniques)

International students who wish to present a lecture or similar classroom experience to undergraduate classes must first be evaluated and approved by the University's English Language Institute for their language proficiency.

1. PROCEDURE FOR PETITIONS FOR VARIANCE IN DEGREE

Requests for variance in degree requirements (e.g., course substitution policies, completion deadlines, etc.) must be approved by the advisor and ideally discussed with and agreed upon by the student's entire graduate committee. (See "Courses ineligible towards degree" below.)

2. GRADE MINIMUMS

See University policy.

3. COURSES INELIGIBLE TOWARDS DEGREE

Registration as a listener (L) or enrollment in undergraduate-level courses will not apply toward the degree. Course work which is not previously approved may be judged unacceptable by the graduate advisory committee and, therefore, should be discussed with committee members when registering.

4. ENGLISH COMPETENCY

Students are expected to communicate effectively in written and oral English, including the ability to concisely present their data and compose a manuscript or research proposal. This will be assessed by the advisor and graduate committee and, more formally, during seminar presentations.

B. COMMITTEES FOR EXAMS, THESIS, OR DISSERTATIONS

1. PROCEDURE FOR SELECTING COMMITTEE MEMBERS

The major advisor and student should discuss potential committee members who might provide support for the student's research. It is the responsibility of the graduate student to ask each committee member if they are willing to serve.

Requirements for the composition of advisory committees are:

M.S. Student:

- The committee will consist of a minimum of three members; the advisor and at least one other PLSC faculty member (full-time or affiliate). The third member may be PLSC faculty, other UD faculty, or a scientist external to UD.

Ph.D. Student:

- The committee will consist of a minimum of four members; the advisor and one other member of the PLSC full time or affiliate faculty and two other members who are UD full time faculty or scientists external to the University.

2. DEADLINES

Establishment

The graduate committee must be established before the end of either the first [M.S.] or second semester [Ph.D.] after matriculation, depending on the applicable degree program. Coincident with its establishment, it is the responsibility of the advisor to notify the Department Chair in writing of the committee members and affiliations. (See Expected Timelines C.1 below.)

Meetings

Graduate committees must meet at least once each year and meetings every 6 months are recommended. It is the responsibility of the student to organize the meetings; failure to do so will be apparent in the required annual progress report (see section D1 below) and will come to the attention of the department chair and graduate studies coordinator for action.

Responsibilities of committee members include the following:

- Work with student to develop a program of study
- Review research proposal defense and provide recommendations
- Ensure acquisition of skills (competence in certain laboratory, greenhouse, and/or field research techniques is essential for completion of an acceptable thesis or dissertation) are developed
- Serve as advisory body during period of candidacy

- Administer written and oral qualifying examinations to Ph.D. candidates
- Establish the contribution of the thesis or dissertation to chosen area of expertise and determine the degree of scholarship attained by the student

3. EXAMINATION AND GRADING POLICIES

Ph.D. candidates must have at least one year between their qualifying exam and their defense.

Formal grading of committee examinations is at the discretion of the student's graduate committee.

4. GUIDELINES FOR RESEARCH PROPOSALS INVOLVING HUMAN OR ANIMAL SUBJECTS

Students must attend human or animal subjects training and request approval from the human or animal subject committee at the University. Proposals that include interviews, case studies, or other interrogative methodologies must have all questions approved by the University Human Subjects Review Board.

5. PROCEDURES FOR THESIS/DISSERTATION APPROVAL

Admission to candidacy for the Ph.D. degree, and acceptance of the M.S. thesis or Ph.D. dissertation in partial fulfillment of the degree requirements, will be recommended if no more than a single dissenting vote is cast by the graduate committee.

6. PROCEDURES FOR CHANGES IN COMMITTEE MEMBERS

Changes are to be coordinated by advisor and student when necessary.

C. TIMETABLE AND DEFINITION OF SATISFACTORY PROGRESS FOR DEGREE

1. ACADEMIC LOAD EXPECTATIONS

Teaching and research assistants must register for 6 and 9 credit hours, respectively, of graduate level course work per semester. Students holding fellowships must register for 9 credit hours of graduate-level course work per semester.

2. GRADE REQUIREMENTS

Graduate students receiving financial assistance must maintain a 3.0 overall GPA. If a student's GPA should fall below this level, loss of stipend is possible. A one-semester grace period may be provided in which the student has the opportunity to improve his/her GPA. However, the grace period is not automatic and requires approval that is initiated by a written request from the

faculty advisor to the Department Chairperson and the Graduate College. A student's stipend may be reinstated, if lost for academic or other reasons, only after approval by the Department Graduate Studies Committee and the Department Chairperson. Any graduate student, self-supporting or those receiving financial assistance, with a GPA less than 3.0, is subject to a reclassification of academic status to warning, probation, or termination depending upon the severity of the substandard academic performance. Details are provided in the University Graduate Catalog. It is the responsibility of the faculty advisor to inform the Chairperson of substandard academic performance.

D. THESIS/DISSERTATION PROGRESS TIMETABLE GUIDELINES

1. EXPECTED TIMELINES

Following are expected timelines for new students; these commence during the academic semester (i.e., Fall or Spring) following enrollment. ***Students are required to prepare annually a one-page report of their degree progress and submit it to the graduate advisory committee, with a copy forwarded to the department chair and graduate coordinator.***

Students for M.S. degree

M.S. full-time (thesis, or non-thesis option¹)	
Year 1	<p><i>1.1</i> Primary advisor chosen prior to acceptance</p> <p><i>1.2</i> Committee chosen before end of first academic semester post- matriculation</p> <p><i>1.3</i> Advisor notifies dept chair of advisory committee composition</p> <p><i>1.4</i> Committee meeting before end of first academic semester post- matriculation</p> <p><i>1.5</i> For thesis M.S., proposal defense before the end of the second academic semester post-matriculation</p>

¹ Non-thesis option master's students must pass an oral examination administered by their graduate advisory committee.

Year 2	<p>2.1 Committee meeting before end of third academic semester post- matriculation</p> <p>2.2 Degree defense¹ (at least six months must separate time of proposal defense and degree defense)</p>
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M.S. part-time	
Year 1	<p>1.1 Primary advisor chosen prior to acceptance</p> <p>1.2 Committee chosen before end of first regular semester post-matriculation</p> <p>1.3 Advisor notifies dept chair of advisory committee composition</p> <p>1.4 First committee meeting held before end of second regular semester post-matriculation</p>
Year 2	<p>2.1 Committee meeting in third academic semester post-matriculation</p>
Year 3	<p>3.1 Committee meeting in fifth academic semester post-matriculation</p>
Year 4	<p>4.1 Degree defense (at least six months must separate time of proposal defense and degree defense)</p>

Students are required to prepare annually a one-page report of their degree progress and submit it to the graduate advisory committee, with a copy forwarded to the department chair.

Master's students funded by teaching and research assistantships/fellowships must register for a minimum of 6 and 9 credit hours, respectively, each fall and spring semester. This requirement can be met by taking fixed credit course(s), Research (PLSC 868), or Master's Thesis (PLSC 869), or some appropriate combination thereof.

Students for Ph.D. degree

There are two general timelines for Ph.D. students: (i) a 3-year program for those students having been previously awarded an M.S. degree, and (ii) a 5-year program for those students possessing a B.S. degree (no M.S.) or those with an M.S. degree who wish to participate in laboratory rotations. The two options within the 5-year program differ only during Year 1. The following

timelines are highly recommended for completion of the degree. The normal time to completion for part-time Ph.D. candidates will generally exceed five years.

Ph.D. full-time (3-year)	
Year 1	<p><i>1.1</i> Primary advisor chosen prior to acceptance</p> <p><i>1.2</i> Committee chosen by end of second academic semester post-matriculation</p> <p><i>1.3</i> Advisor notifies dept chair of advisory committee composition</p> <p><i>1.4</i> Committee meeting by end of second academic semester post-matriculation</p>
Year 2	<p><i>2.1</i> Committee meeting before end of third academic semester post-matriculation for purposes of pre-proposal discussion (recommended)</p> <p><i>2.2</i> Research proposal must be written and turned into committee and defended before end of third academic semester post-matriculation</p> <p><i>2.3</i> Qualifying exams must be held before the end of the fourth semester post-matriculation</p>
	<p><i>2.4</i> Participation in the Department's graduate student symposium (at least once during Years 2 & 3)</p>
Year 3	<p><i>3.1</i> Committee meeting</p> <p><i>3.2</i> Degree defense (at least six months must separate time of proposal defense and degree defense)</p>

Ph.D. full-time (5-year)		
Year 1	Lab Rotations	<p><i>1.1</i> Laboratory rotations not to exceed six months</p> <p><i>1.2</i> Primary advisor chosen by end of rotations</p> <p><i>1.3</i> Committee chosen at the completion of laboratory rotations or by end of second academic semester post-matriculation, whichever comes first</p> <p><i>1.4</i> Advisor notifies dept chair of advisory committee composition</p> <p><i>1.5</i> Committee meeting by end of second academic semester post- matriculation</p>
	No Lab Rotations	<p><i>1.1</i> Primary advisor chosen prior to acceptance</p> <p><i>1.2</i> Committee chosen by end of second regular semester post- matriculation</p> <p><i>1.3</i> Advisor notifies dept chair of advisory committee composition</p> <p><i>1.4</i> Committee meeting by end of regular second semester post- matriculation</p>
Year 2	<p><i>2.1</i> Research proposal must be written, turned into committee, and defended during the 2nd year</p> <p><i>2.2</i> Committee meeting before end of fourth academic semester post-matriculation (may be concomitant with research proposal defense)</p> <p><i>2.3</i> Participation in the Department's graduate student symposium (at least once during Years 2 – 4).</p>	
Year 3	<p><i>3.1</i> Qualifying exams must be held no later than the end of the sixth academic semester post-matriculation.</p>	
Year 4	<p><i>4.1</i> Committee meeting</p>	
Year 5	<p><i>5.1</i> Committee meeting</p> <p><i>5.2</i> Degree defense (at least six months must separate time of proposal defense and degree defense)</p>	

Students are required to prepare annually a one-page report of his/her degree progress and submit it to the graduate advisory committee, with a copy forwarded to the department chair.

Upon the recommendation of the doctoral student's advisory committee and the Department Chairperson, students may be admitted to candidacy for the Ph.D. degree. The stipulations for admission to doctoral candidacy are that the student has

- (1) a program of study approved,
- (2) completed one academic year of full-time graduate study at the University,
- (3) passed the program's qualifying examination(s),
- (4) shown the ability to do research, and
- (5) had a research project accepted by the advisory committee.

Ideally, the qualifying exam should be taken after all minimum degree course requirements have been fulfilled (PLSC 802 and PLSC 865) but may be taken as early as one month before that time.

The deadline for admission to candidacy for the fall semester is August 31. The deadline for admission to candidacy for the spring semester is January 31. The deadline for admission to candidacy for the summer is April 30. Responsibility for seeing that admission to candidacy is secured at the proper time rests with the student. For Ph.D. students pursuing 3- or 5-year programs respectively, the qualifying exams must take place at least two or four academic semesters prior to the dissertation defense (described below).

Once the student has met all of the course requirements in a program of study but has not yet met all of the stipulations for passing into candidacy (i.e., is in G1 status), the student must maintain the minimum registration requirements (6 or 9 credit hours) during the fall and spring semesters either as regular courses, Research (PLSC 868), Pre-Candidacy Study (PLSC 964), or as some appropriate combination thereof. Pre-Candidacy Study (PLSC 964) is graded pass/fail. (Students who are classified G1 and are holding a graduate teaching assistantship or tuition scholarship must be registered for a minimum of six graduate credits, and those holding a graduate research assistantship or fellowship must be registered for a minimum of nine graduate credits.)

Once a student has met all of the stipulations for candidacy and becomes classified with G2 status (candidacy), the student is required to register in a total of nine credit hours of Doctoral Dissertation (PLSC 969) prior to graduation. Registration in Doctoral Dissertation (PLSC 969) and Doctoral Sustaining (PLSC 999) is restricted to students with G2 status. Once the student has completed all course work and has registered in a total of nine credits of Doctoral Dissertation, the student is required to maintain matriculation in the doctoral program by registering for either six or nine credit hours of Doctoral Sustaining (PLSC 999) in subsequent semesters until the degree is awarded. The student may not take any courses while registered for PLSC 999. All students must be registered in the term in which the degree is officially awarded. (Sustaining registration is not required in summer and winter sessions unless the degree is to be awarded at the conclusion of those sessions.)

Advancement to candidacy is contingent upon successful completion of written and oral qualifying examinations (to be completed by the end of the fourth academic semester of a 3-year program, or by the end of the sixth semester of a 5-year program) administered by the student's advisory committee.

The student will show written competence in areas selected by the advisory committee. The oral qualifying examination will provide an overview of the concepts and plans making up the proposed Ph.D. project. The oral examination is intended to evaluate the student's abilities in several areas: creative thinking, progress in understanding and formulating a research project, and preparation and presentation of a technical talk. The oral qualifying examination and research proposal defense may take place at the same advisory committee meeting. The written research proposal will be given to committee members at least five working days before the scheduled oral defense. Qualifying exams for progress to degree candidacy may be taken at most twice. Deadline dates are outlined in the University graduate catalog. Responsibility for seeing that admission to candidacy is secured at the proper time rests with the student.

2. THESIS/DISSERTATION DEFENSE GUIDELINES

An oral defense of the thesis or dissertation is required for all graduate students in Plant and Soil Sciences. Awarding of the M.S. (thesis option) or Ph.D. degree is contingent upon successful oral defense of the research performed, an acceptable thesis/dissertation and a demonstrated knowledge of related disciplines. Students are expected to give a presentation just prior to the oral defense of their thesis/dissertation. The presentation is to be publicly announced within the department at least one week prior to the defense date. A student shall have no more than two attempts to defend their thesis/dissertation. Deliberations of the graduate committee will be limited to committee members, and the outcome immediately conveyed to the student. For Ph.D. students pursuing 3- or 5-year programs respectively, at least two or four academic semesters must be completed between the time of the qualifying exam and the defense. For both the M.S. and Ph.D., the final research defense must occur at least six months after the proposal defense.

Awarding of the non-thesis Master's degree is contingent upon: (i) successful completion of all required and elective course work as determined by the student's graduate advisory committee and (ii) passing an oral examination administered by the student's graduate advisory committee at the termination of the degree program. Non-thesis M.S. students are also required to present their findings to the Department as described above.

3. FORMS REQUIRED

Available from the Graduate College.

4. CONSEQUENCES FOR UNSATISFACTORY PROGRESS.

If a graduate student fails to make satisfactory progress toward all degree requirements, permission may be denied continuing in the degree program. This is in keeping with University of Delaware [Graduate Student Policy](#). We strongly encourage all graduate students to access and read this information.

Continuation and successful completion of a graduate program is contingent upon adherence to the University's student [Code of Conduct](#). Violations include, but are not limited to, academic dishonesty, falsifying data, plagiarism, unprofessional conduct, and harassment of others (sexual or otherwise). Violations may result in termination of the offender's graduate program.

Grievance procedure for termination Information on filing a grievance can be found in the University Graduate Section of the University Catalog under Grades and Academic Standing, Probation, and Dismissal.

E. ASSESSMENT

The Department of Plant and Soil Sciences is highly diverse and includes disciplines ranging from landscape architecture to both basic and applied physical and biological sciences. As such, this section is necessarily general in its wording.

1. PROGRAM MISSION STATEMENT

The mission of the graduate programs in the Department of Plant and Soil Sciences is to provide an excellent education within a given discipline area and train students to apply this knowledge in performing research/scholarly activities of high professional standards. As a land-grant entity, the Department is also committed to serving the needs of Delaware and the Mid-Atlantic region.

2. PROGRAMMATIC LEARNING GOALS

Graduates of the Department of Plant and Soil Sciences will demonstrate the following:

1. a high level of knowledge in their respective subject area and related disciplines,
2. a strong competency in performing scholarly activities (conceptualization, execution, presentation), and
3. a commitment to professional ethics and an appreciation of interdisciplinary collaboration.

3. CURRICULUM MAP

See following page.

Curriculum Map of Graduate Programs in Plant and Soil Sciences

Program activities are presented in broad terms due to the diversity of disciplines within the PLSC Department.

Desired Learning Outcomes	Courses			Program Activities			
	PLSC 802: Professional Development	PLSC865: Departmental Seminar Series	Other courses as determined by advisory committee	Laboratory and Field Work	Preliminary Examinations (Ph.D. only)	Thesis/Dissertation Proposal, Defense, and Presentation	Graduate Student Symposium
Students demonstrate high level of knowledge of their chosen discipline area and related disciplines	Introduce	Emphasize	Emphasize	Reinforce	Emphasize	Emphasize (quality of proposal conceptualization and answers to questions posed)	Reinforce
Students clearly demonstrate an ability to conceptualize a problem/issue, formulate and execute appropriate strategies for resolution, and communicate resulting outcomes in a professional setting	Introduce	Introduce and Reinforce (by example and presentation)	Reinforce	Emphasize	Reinforce	Emphasize (critical thinking, conceptualization, analysis, presentation, and publication)	Reinforce
Students develop a critical understanding of professional ethics and an appreciation of interdisciplinary research	Introduce	Emphasize	Reinforce (appreciation for interdisciplinary connections)	Reinforce (ethical recording of research data)	Reinforce	Reinforce	Emphasize

PART IV. FINANCIAL AID

A. FINANCIAL AWARDS

1. TYPES OF AWARDS

Acceptance of all full-time graduate students in the Department is contingent on the availability of financial support from the Department or from the advisor's research grants. The two types of support commonly available are teaching assistantships and graduate research assistantships. In some cases, fellowships may also be available on a competitive basis. Research assistants receive a stipend 12 months/year (i.e., including summer months). Teaching assistants are paid from their assistantships during September through May only and normally receive comparable pay during the summer from other sources of funding (e.g., advisor's research projects). Graduate students are expected to give their full-time attention to graduate study and may not engage in any other remunerative employment while receiving a stipend.

1. Teaching Assistantships – Students assist in teaching undergraduate and/or graduate courses. Students may be expected to prepare and grade examinations under the supervision of the instructor, handle routine class administrative procedures, counsel and tutor individual students where necessary, and occasionally conduct classes. Total workload may not exceed 20 hours per week. Students should view this as an opportunity to enhance their knowledge and to develop teaching skills at the college level. Assignments are made by the Chair after consultation with faculty member(s) in charge of the course(s), who may or may not include the student's graduate advisor. Students on a teaching assistantship must enroll for a minimum of 6 credits unless they have completed all degree course requirements whereupon they may register in sustaining status.
2. Research Assistantships – Students are typically funded via one of the advisor's research projects for 20 hours per week. This research may or may not be the same as the student's thesis or dissertation research. Students on research assistantships are expected to enroll in a minimum of 9 credits per semester until the course requirements for the degree are fulfilled. After completing the course requirements, students on research assistantships may enroll for a minimum of 6 credits or as sustaining.
3. Fellowships – Department, College, or University Fellowships are usually reserved for students in the advanced stages of their graduate careers to support thesis and dissertation research and writing. They are generally awarded on a competitive basis. Students holding a fellowship must register for 9 credits each semester.

2. POLICY FOR GRANTING FINANCIAL SUPPORT

A commitment for student funding must be made prior to acceptance by the Department.

For supplemental or alternative funding, such as Pell Grants and student loans, please see:
<https://www.udel.edu/students/student-financial-services/graduate/>

3. SUMMER APPOINTMENTS

All full-time graduate students who are actively receiving a stipend are expected to work on research or other appropriate scholarly activity during the summer months. As stated previously under “Types of awards”, teaching assistants normally receive a summer stipend from nonteaching sources of funding. The Department does not allow students to obtain additional employment within or outside the University while supported by a stipend. To do so will be viewed as indicating a lack of commitment by the student to his/her graduate program and may result in termination.

4. NUMBER OF YEARS OF SUPPORT

Students pursuing an M.S. degree normally receive two years of financial support, whereas Ph.D. students receive either three or five years of support depending on their particular program. In some cases, extensions may be granted but are not automatic. Extensions must be approved by the advisor or Department Chair depending on the source of the funding.

B. Graduate Student Work Expectations

The 20-hour work requirement associated with receiving a Teaching Assistantship (TA) and Research Assistantship (RA) is in addition to hours dedicated to working on one’s thesis/dissertation research. Students on a Teaching Assistantship are required to meet the teaching responsibilities associated with their position (nominally 20 hours per week) and also work on their thesis/dissertation research based on the credit hours registered for the semester. Students on a Research Assistantship are responsible for conducting up to 20 hours per week of research to help their advisor meet his/her grant responsibilities in addition to devoting time to their individual thesis/dissertation research to meet the research credit hours registered for the semester. In some cases, the nature of a grant may allow a student to devote all hours to their own research (being paid for 20 of those). In other cases, the student’s advisor may require a student to devote up to 20 hours per week to other, non-thesis/dissertation research.

The PLSC graduate funding is aligned with a student’s progress toward timely graduation, and many students choose to devote more research hours to finish on time and improve their career options or teaching skills. Students can obtain additional guidance and details at the UD Graduate College —

Graduate Policies website (link):

[Graduate Policies | Graduate College | University of Delaware \(udel.edu\)](#)

Students should in particular review the sections “Fellow or Assistant Payment” and “Graduate Contract Additional Employment Policy” found under the heading “STUDENTS ON CONTRACT”.