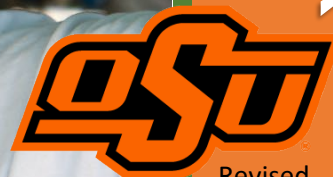




HORTICULTURE GRADUATE HANDBOOK

Horticulture and Landscape Architecture



Revised
June 1, 2023

GRADUATE HANDBOOK
Horticulture Graduate Program
OKLAHOMA STATE UNIVERSITY

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I. INTRODUCTION

Welcome to graduate study in the Department of Horticulture and Landscape Architecture at Oklahoma State University. You are now involved in a phase of your education that will define your future and shape your career. It is the desire of the faculty and staff that you perform well, make significant advancements and be successful in your future endeavors. We are delighted that you have chosen to focus on the various aspects of Horticulture, and we are committed to assisting you in achieving your aspirations.

This handbook provides guidance as you navigate the various milestones towards your degree. Your graduate training includes coursework and concentrated, independent study in your area of specialization. While our program provides guidance and sets some minimum expectations for coursework, your major professor and graduate committee will assist you in selecting courses which best prepare you for your research project. Your research project is primarily formulated between yourself and your major professor, but you are encouraged to seek guidance from your graduate committee and others in order to plan a sound and impactful project. You are provided the opportunity to share your research plans and receive feedback through a proposal seminar. At the completion of your research, you are again provided an opportunity to share and receive feedback in your results seminar. The culmination of your degree is completion and defense of a thesis or formal report, to be shared via peer-reviewed publication to appropriate audiences.



Strive to make your graduate training more than just your coursework and research project. Gain a familiarity with research conducted by fellow students and faculty in our Department. Participate in professional meetings to gain a perspective about how your project contributes to advancing knowledge in your chosen area of specialization. As you broaden your understanding of work completed and underway you will gain a unique perspective; one which will enable you to advance our knowledge in your chosen area of specialization.

The Horticulture graduate program is now your program. We hope you will identify with our program and take pride in participation within it. We hope you will be satisfied with your efforts, and the efforts of those around you, as you participate in our graduate program. If there are ways we can improve your graduate educational experience, please feel free to contact the Graduate Coordinator or Department Head.

General policies regarding graduate training at Oklahoma State University are established at two levels of academic administration – the Graduate College administers general university policy and the Department administers policies relevant to the Horticulture discipline. This handbook is

intended to bring these policies together and inform you of expectations as you complete your graduate training. A general outline of deadlines and schedules for meeting University requirements for your degree can be found at the Graduate College website (<http://gradcollege.okstate.edu/>). In general, Departmental policies are established to provide discipline-specific guidance for your graduate training. University and Graduate College policies may not be overridden by Departmental policies.

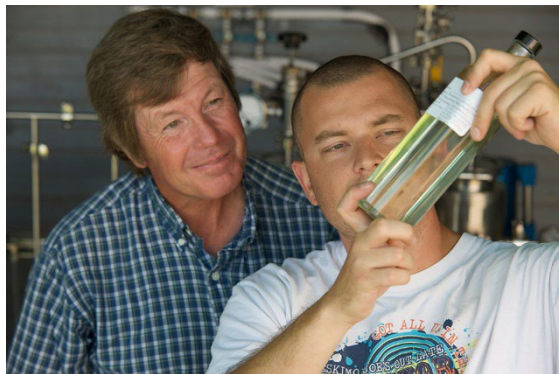
II. PROGRAM OVERVIEW



Students may participate in the Horticulture Graduate Program through the Horticulture MS degree program which can be completed through one of two options: the Horticultural Science option or the Horticultural Practice option. The Horticultural Science option requires completion of a minimum of 30 hours of coursework including 6 hours of HORT 5000, Thesis Research. The Horticultural Practice option requires completion of a minimum of 36 hours of coursework including 2 to 8 hours of HORT 5110, Special Problems.

Students may also obtain a Ph.D. degree with a concentration in Horticulture through participation in the Crop Science, Plant Science, Environmental Science or Food Science Graduate Programs. For specific requirements of these programs see their respective web sites. Departmental requirements are specified in the Degree Requirements section (part IV) of this handbook.

Your interaction with the Horticulture Graduate Program begins with our Departmental faculty. A full listing of current faculty with links to additional information regarding their areas of expertise and research interests can be found at <http://www.hortla.okstate.edu/about-us/faculty>. Our Departmental faculty and Emeriti faculty include numerous Fellows of the American Society for Horticultural Science (ASHS), many of which have served and/or are serving in key leadership positions for the society. Faculty within our Department occupy a number of prestigious endowed chair positions: The Huffine Endowed Professor of Turfgrass Science, the Charles and Linda Shackelford Endowed Professor of Floriculture, the Scottie Scott Endowed Professorship, and the Virgil and Marge Jurgensmeyer Endowed Research Professorship in Product Development.



Our graduates can be found working in areas of research, extension and teaching around the globe. Our MS graduates are employed in the public and private sectors, often extending their education to Ph.D.'s. While research is a major focus for most of our students, our Land Grant tradition and focus allows students to become involved in service and teaching roles of the

Department. Our research programs often involve interaction with commercial-sector Horticulture, which provides our graduates with real-world problem solving skills.

Horticulture MS students typically complete their degrees in two to two and one-half years. Important milestones during a degree program include getting acquainted with ongoing work of your major professor during your first semester. You should be seeking members of your thesis or formal report committee (typically one from within our department and one from outside our department) and formalizing the committee before the end of your second semester. All students devise a proposal for their work which should be completed in consultation with major advisor and with input from the committee by the second semester. Students receive feedback from departmental faculty and fellow students by giving a proposal seminar, typically during their second semester. A plan of study, outlining courses to be taken for completion of the degree, must be developed, submitted to the Graduate College and signed by major professor, committee members and the Graduate Coordinator before enrollment in the 17th hour of coursework (plan of study forms can be accessed from the Graduate College website at <http://gradcollege.okstate.edu/> and are submitted on-line). Since most students enroll in an average of 15 hours of courses per

year, this coincides with completion of the first full year of study: students typically complete the plan of study and their proposal coincidentally. Most students are immersed into their research project before completion of their first full year and complete their research within one and one-half years. A student's final semester is typically spent writing a thesis. The Graduate College has guidelines for thesis preparation at their website which must be adhered to in the final



document. An MS thesis is a cooperative work product between the student and major professor; once satisfactorily completed it is shared with the committee, at least two weeks in advance of your defense of the thesis. Students typically submit a draft form of their thesis to the Graduate College at this time. The student prepares and gives a results seminar to receive feedback from departmental faculty and fellow students at this time. The thesis defense, involving participation by the student, major professor and committee members, is typically scheduled no earlier than two weeks after submission of the thesis to the committee. The purpose of the thesis defense is to clarify information contained in the thesis and for the student to receive constructive criticism related to their project. Committee members provide suggestions for improvement of the thesis document and, if approved, the student incorporates these suggestions into a final thesis document which is then submitted to the Graduate College in its final form. Students must file a "Thesis/Dissertation Oral Defense Form" with the Graduate College immediately following the thesis defense (students are urged to make a digital or paper copy of this form prior to submission). For purposes of graduation during any given semester, the Graduate College maintains strict deadlines on their website (see link above) for submission of the draft and final thesis documents and for submission of the oral defense form. It is the responsibility of the student to assure all deadlines are met for graduate in any given semester. Early during Fall and Spring semesters the Graduate College also offers thesis writing workshops, which students are encouraged to attend as they enter their thesis writing time period.

International students entering the Horticulture Graduate Program must meet specific criteria prior to admission by the Graduate College (<http://gradcollege.okstate.edu>). Upon arrival in Stillwater all international students on assistantship must check in with the Oklahoma State University International Students and Scholars (ISS) office to obtain a work clearance form and obtain information regarding application for a Social Security number. These steps must be completed prior to payroll signup, completed by Departmental office personnel in 358 Agriculture Hall. More information regarding requirements specific to international students can be found at the Oklahoma State University International Students and Scholars web site (<https://lcl.okstate.edu/iss/>).



Students in the Horticulture Graduate Program are expected to participate in Departmental programs outside of their research topic area in order to gain a well-rounded education. Students are expected to attend seminar to gain insight into fellow students' projects, learn more about faculty programs and benefit from speakers outside our Department. Avenues for sharing research results are available at the University level via

participation in the Graduate and Professional Student Government Association (GPSGA) Research Week activities. Students are also encouraged to provide research updates, network, gain knowledge of research conducted at other research institutions and become aware of employment opportunities via participation in professional meetings. Professional meetings typically attended by our students include American Society for Horticultural Science (<https://ashs.org/>), Crop Science Society of America (<https://www.crops.org/>) and various state, regional and international meetings. Travel assistance to these meetings can be obtained from the GPSGA (<https://gradcollege.okstate.edu/gpsga/>) and may be supplemented by funds from your major professor.

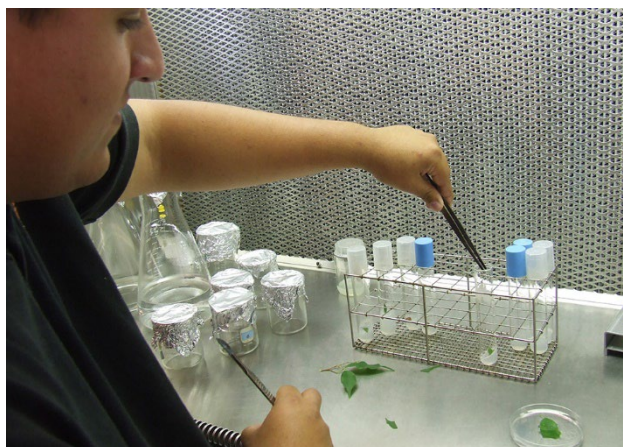
The following policies have been adopted by the Horticulture Graduate Program, which place the major responsibility for your program of graduate studies on you as a graduate student. Some key policies are:

1. The completion of the requirements for the Master's and/or Doctor's degree is the responsibility of the candidate (student) and the major professor.
2. It is the candidate's responsibility to file and maintain correct records of progress with his/her major professor, Graduate Committee, and the Graduate College.
3. The candidate, the major professor and the graduate advisory committee are responsible for the program of study and thesis report, the formal report or dissertation research. If you are working toward an M.S. degree, your major professor is the key figure in your program, and committee advice is sought for completion of the plan of study and input into the research proposal and research thesis. If you are working toward a Ph.D. degree, your major professor and advisory committee members interact during all phases of your degree program.

The most important person in your graduate program is your major professor. You have the responsibility of maintaining contact with him/her and your advisory committee. It will be to your advantage to keep your advisor and committee informed of your research plans. Frequent contact is encouraged. Many short conferences are better than one major conference.

One important responsibility of each graduate student is to become familiar with the ‘Tools of the Trade’. That is, each student should learn to properly use the research and teaching facilities. If your research involves controlled environment plant production, go to the greenhouse or

growth chambers and learn how to mix soil, how temperature is controlled, and how to water and fertilize the plants. Go to the facility where you will conduct research and familiarize yourself with proper utilization of all resources – you are responsible for proper use and maintenance of resources you use. Learn how the equipment you use operates. Watch and participate in land preparation, planting, spraying and harvesting. Call the supervisor of the facility and schedule a few hours or even a few days to work with them.



Visit with other graduate students, technicians, and faculty to learn the theory and practice of using laboratory instrumentation. You need not spend a great deal of time learning these things, but the experience is important. This familiarization will make it possible to better prepare yourself for your own research project.

One important responsibility of each graduate student is to become familiar with the ‘Tools of the Trade’. That is, each student should learn to properly use the research and teaching facilities. If your research involves controlled environment plant production, go to the greenhouse or growth chambers, and learn how to mix soil, how temperature is controlled, and how to water and fertilize the plants. Go to the facility where you will conduct research and familiarize yourself with proper utilization of all resources – you are responsible for proper use and maintenance of resources you use. Learn how the equipment you use operates. Watch and participate in land preparation, planting, spraying and harvesting. Call the supervisor of the facility and schedule a few hours or even a few days to work with them. Visit with other graduate students, technicians, and faculty to learn the theory and practice of using laboratory instrumentation. You need not spend a great deal of time learning these things, but the experience is important. This familiarization will make it possible to better prepare yourself for your own research project.

Research safety is also important for you and for those working around you. All students, faculty and staff at Oklahoma State University are required to complete quarterly safety training modules and provide proof of completion. Visit https://ehs.okstate.edu/training/quarterly_training.html for details and access to training modules.

III. ADMISSION AND PROGRAM COMPONENTS

Admission to the Horticulture Graduate Program requires completion of the Oklahoma State University Graduate College application for admission, completed on-line. This process and application forms can be found at the Graduate College website (<http://gradcollege.okstate.edu/>). This application is specific to the semester for which you apply and must be conditionally approved by the Graduate College before it can be forwarded to the Horticulture Graduate Program for consideration. In addition to Graduate requirements, our program requires



completion of the GRE, submission of a Statement of Purpose (summarizes why you want to do graduate studies within the Horticulture Graduate Program, what your research interests are and, if possible, who you would like to work with as major professor) and submission of three letters of reference. Once your application is complete and you have been provisionally admitted by the Graduate College, your application is forwarded to the Graduate Coordinator and a

program admission decision is made by the Horticulture Graduate Committee (usually takes two to four weeks after receipt from the Graduate College). The program's admission decision is then conveyed by the Graduate Coordinator to the Graduate College for admission to the University. Official letters concerning your admission are generated and transmitted back to you. If you are admitted to the Horticulture Graduate Program, the conditions of your admission are included in an acceptance letter. You are required to sign an acceptance of these conditions and return to the Graduate Coordinator within the time stated in the letter. We suggest students arrive in Stillwater at least one week prior to start of classes – if a student does not report to our main office (358 Agriculture Hall) at least one day prior to the start of the semester in which they are admitted, the admission offer becomes nullified.

Students wishing to pursue a Ph.D. degree with Horticulture as a concentration area may apply to one of four Graduate Programs to administer their admission: Crop Science, Plant Science, Environmental Science or Food Science. Each of these interdisciplinary programs have specific admission requirements which can be accessed from the Graduate College website identified above. After admission to one of the interdisciplinary programs identified above, any specific Horticulture requirements for students matriculating within these programs are included in the Degree Requirements section of this Handbook (section IV.).

International students seeking admission to the Horticulture Graduate Program must meet certain English proficiency requirements if English is not their native language. The Graduate College has minimum TOEFL scores which must be met prior to acceptance by any Graduate Program (TOEFL iBT of 79 is currently the lowest score permissible). If a student demonstrating unusual academic promise scores below 79, but at least 61 on the TOEFL iBT they can be admitted to the Oklahoma State University English Language Institute (ELI) for additional English training and assistance to achieve a higher TOEFL score. See the ELI website for more information

(<https://go.okstate.edu/admissions/international/eli.html>). In addition to the Graduate College minimum TOEFL score requirement, the Horticulture Graduate Program requires a minimum score of 88 on the TOEFL. If a student obtains a TOEFL score below 88 but has been conditionally admitted and forwarded by the Graduate College to the Horticulture Graduate Program for admission consideration, the Horticulture Graduate Program may consider conditional admittance and require that the student successfully complete ENGL 0003, Academic English for Graduate Students (minimum grade of S) and ENGL 4893, Research Writing for International Graduate Students (minimum grade of B) during their first semester in our Program, provided they meet other minimum admission requirements and a potential major professor agrees to these provisions. While ENGL 4893 is approved for graduate credit and may appear on a plan of study, ENGL 0003 is not approved for graduate credit, may not appear on a plan of study and tuition may not be waived for students on qualifying assistantships.



If students applying for admission to the Horticulture Graduate Program are deemed admissible but lack an adequate academic background in their chosen specialization area, as evidenced by a transcript evaluation, certain provisions and conditions may be required for admittance. For example, if a student wants to conduct research on turfgrass but has never taken a class related to Turfgrass Science, they may be required to take one or two classes to satisfy this deficiency. If any provisions for admission are deemed appropriate, these provisions and timetable for completion will be clearly identified in the student's admission letter. Failure to complete provisions for admission within the specified time period may result in dismissal from the Horticulture Graduate Program.

Horticulture MS options

The Master of Science degree in Horticulture may be focused on research in Horticultural Sciences or may entail an in-depth study of the application of Horticultural Sciences within a chosen area of specialization, earned by the following plans:

- A. (Horticultural Science option) Thesis, consisting of thirty (30) credit hours of course work, including six (6) credit hours of HORT 5000, Masters Research and Thesis. The grade of "SR" (for satisfactory research) or "UR" (for unsatisfactory research) will be given. These grades are given in real time and are permanent.

- B. (Horticultural Practice option) Formal report, consisting of thirty-six (36) credit hours of course work, including two (2) to eight (8) credit hours of HORT 5110, Advanced Horticultural Problems.

Programmatic Requirements

The minimum requirements which must be met before the granting of the Master of Science degree by Oklahoma State University are set by the Graduate College and are listed in the Graduate College portion of the OSU catalog (<http://registrar.okstate.edu/University-Catalog>). Since this degree program accommodates a wide range of interests, The Horticulture Graduate Program has established some additional requirements to ensure that students have well-balanced, high-quality programs within the Horticultural Science or Horticultural Practice options. These requirements are not subject to modification by the student's advisory committee without written approval of the Department Head or Graduate Coordinator.

I. Each student will have an advisory committee consisting of at least three (3) members. At least one member of the committee must be from outside the Department of Horticulture & Landscape Architecture. The committee must be established early in the student's program, and all members should have opportunity to advise and assist in the initial development of the plan of study and the thesis or formal report.

II. A Plan of Study (POS) for each student must be filed with the Graduate College prior to completion of the 17th credit hour of course work. Plan of Study forms can be downloaded and submitted from the Graduate College website

(<http://gradcollege.okstate.edu/>). It is imperative that a POS be revised and resubmitted to the Graduate College only once, at the beginning of the student's semester of graduation. It is not necessary to revise the POS if the only change is the semester courses were taken. If the only revision on the POS is a change in committee member(s), then submit a "Graduate Committee Change Request" downloadable from the same web address as the plan of study. Specific Program coursework requirements for MS options A or B are identified in the Degree Requirements section of this Handbook (section IV).



III. A thesis research (option A) or formal report (option B) proposal must be developed by each student pursuing an MS. The proposal must be approved by the advisory committee prior to the beginning of the third full semester of study or prior to enrollment in 17th credit hour of course work, whichever occurs first. The proposal is to be presented during seminar (see Seminar in this section).

IV. Each MS student will be required to present a thesis (option A) or creative component (option B) prepared in accordance with provisions established by the Graduate College and the Horticulture Graduate Program. Generally, a thesis will be expected to conform to the specifications listed in the "Thesis/Dissertation Guidelines" on the OSU Graduate College website. Formal reports are less well-defined but must be peer-reviewed. One example of a formal report is creation of a web-based, interactive teaching tool; another example is creation of an extension fact sheet. Students have wide latitude in selecting a formal report, but must work closely with the major advisor and advisory committee. Appropriate projects support the on-going efforts of the major advisor or departmental need areas, and include the potential for

interaction with a large peer group. A results seminar is required for students completing either MS option (see Seminar in this section).

V. A comprehensive final oral examination will be administered to each Masters degree candidate. For further information, see section VIII of this Handbook.

VI. Academic performance is usually considered to mean grade point average. However, academic performance also includes consideration of your suitability for conducting research, competency in your major field, and your rate of progress toward completion of the degree. All students in the Horticulture Graduate Program have an annual, written evaluation of academic performance to assess satisfactory academic performance (see section IX of this handbook). It is a disservice to students to allow them to continue toward the degree when they lack the necessary qualifications. Judgment regarding retention is made by your major professor and/or committee. If it is decided that you lack such standards, you may be asked to withdraw. The academic standard for course work is an overall grade point average of 3.0. Credits will not be awarded for courses in which a grade below “C” is earned, or for HORT 5000 credits in which a grade of “UR” is assigned. After you have completed a course, it cannot be dropped from your plan of study because of a low grade unless approved in writing by your advisor and the Dean of the Graduate College.

VII. All requirements for the M.S. degree must be completed within seven (7) years from initial enrollment in the degree program. All requirements for the Ph.D. degree must be completed within nine (9) years from initial enrollment in the degree program. Failure to complete the degree within these time limits will result in the loss of all credits that have become out dated. No course on the Plan of Study may be more than 10 years old at the time of graduation. Failure to demonstrate a normal interest in completing the degree may result in you being asked to withdraw your candidacy. These time limits are more than adequate and are generally applicable when a program of study has been interrupted. Normally, an M.S. degree can be completed in 4 to 6 semesters and the Ph.D. in 8 to 12 semesters beyond the M.S. degree.

VIII. Continuous enrollment is expected by all degree-seeking graduate students. Under certain circumstances a student may apply for a Leave of Absence, as described at the Graduate College website (<http://gradcollege.okstate.edu/resources/current-student-resources.html>). A Leave of Absence is not normally granted for a time period over one year and must be pre-approved prior to a lapse in continuous enrollment. Students applying for a Leave of Absence must seek approval in writing from the Graduate Coordinator or Department Head. If approved, they must also obtain approval from the Dean of the Graduate College for the Leave of Absence to take effect.

IX. Seminar: One (1) credit hour of graduate seminar (HORT 5020) is a requirement for each masters degree candidate and two (2) credit hours of graduate seminar are required for Ph.D. candidates. Attendance at departmental seminars and presentation of two (2) seminars are required. The first seminar is to be a research proposal in which the student describes the research problem and outlines the planned research approach. The second seminar is to be a research results seminar in which the student summarizes the findings of the research. All masters students should enroll in HORT 5020 for one credit hour during the semester in which

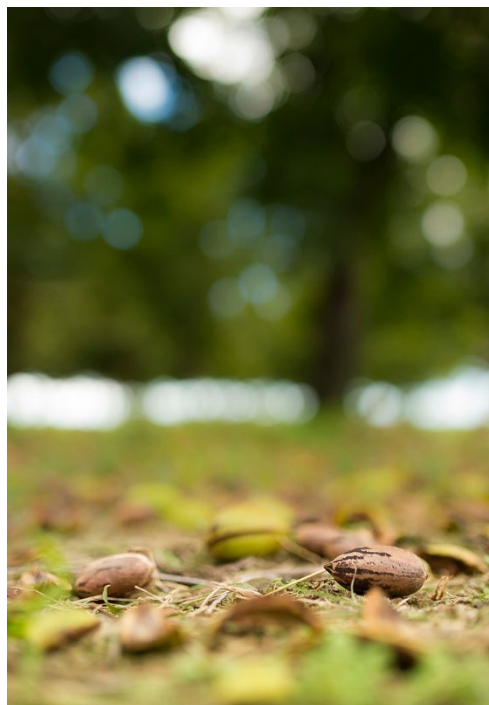
the second (results) seminar is to be given. Ph.D. students should enroll during both semesters seminars are given (total of two credit hours).

Horticulture Ph.D. options

Students may earn a Ph.D. degree in the Crop Science, Plant Science, Food Science, or Environmental Science multidisciplinary programs. Courses taken on a Pass-No Pass basis cannot appear on a Plan of Study for any of the Ph.D. programs. Specific Horticulture requirements are listed for each degree program.

Programmatic Requirements: Doctor of Philosophy Degree in Crop Science - Horticulture

Minimum standards which must be met before the granting of the Doctor of Philosophy degree by Oklahoma State University are set by the Graduate College and are listed in the Graduate College portion of the OSU catalog (<http://registrar.okstate.edu/University-Catalog>). Since the Crop Science degree program accommodates a wide range of interests, the Departments of Plant & Soil Sciences and Horticulture & Landscape Architecture have established some additional requirements to ensure that students have well-balanced, high-quality programs. These departmental requirements are not subject to modification by the student's advisory committee without the approval of the Department Head or Graduate Coordinator.



I. A Graduate Program Advisory Committee of at least four (4) members must be established for each student. Students in the Department of Horticulture and Landscape Architecture must have at least one of the committee members from the Department of Plant and Soil Sciences. Committees must be established early in the student's program and all members should have opportunity to advise and assist in the initial development of a plan of study and thesis research project.

II. A plan of study (POS) should be approved by the Advisory Committee and filed with the Graduate College as early in the program as feasible, but must be filed prior to completion of the 28th hour of enrollment. Plan of study forms can be downloaded and submitted from the Graduate College website (<http://gradcollege.okstate.edu/>). It is imperative that a POS be revised and resubmitted to the Graduate College only once, at the beginning of the student's semester of graduation. It is not necessary to revise the POS if the only change is the semester courses were taken. If the only revision is a change in committee member(s), then submit a "Committee Change Request" form (see <http://gradcollege.okstate.edu/>), rather than a new or revised POS.

III. A thesis research proposal must be developed by each student and approved by his/her committee prior to the beginning of the third full semester of study beyond the M.S. degree. The proposal must be presented during seminar (see Seminar in this section).

IV. An Admission to Doctoral Candidacy Form must be completed and signed by the student, advisor, committee members, department head, and Dean of the Graduate College not less than 6 months before the anticipated semester of degree completion. The form verifies that the student has completed a dissertation proposal approved by the advisory committee, successfully passed the qualifying exam, and has an approved Plan of Study filed with the Graduate College. The Admission to Doctoral Candidacy form is available on the Graduate College website (<http://gradcollege.okstate.edu/>).

V. Additional departmental requirements relating to course work (Core Curriculum) specific to this option can be found in section IV. (Degree Requirements) of this Handbook.

VI. Proficiency Requirements

Each student must demonstrate proficiency in the use of the English language to the satisfaction of his/her advisory committee. Advisory committees may stipulate that students have mathematics through calculus. Each student must also demonstrate proficiency in research methodology and in his/her ability to conduct independent research.

VII. Enrichment Requirement

In order to add breadth to the educational experience, each student must have a minimum of six (6) hours of course work in a subject matter area complimentary to the core curriculum. The minimum six hours must be in courses above any base level that is required in the Degree Requirements section. For instance, if the enrichment subject matter area is statistics, then the six hours of required course work would be in addition to the required course work listed in the Degree Requirements section for the Crop Science Ph.D. option of this Handbook. The courses used to satisfy this requirement should be identified on the second page of the Plan of Study form where space is provided to indicate if a foreign language is required and/or how proficiency requirements are to be met.

VIII. Required Examinations

Students are required to pass three (3) examinations during the course of the Crop Science-Horticulture Ph.D. degree program. The examinations are:

1. Preliminary examination. This examination is required by the department and is administered by the advisory committee prior to the beginning of the third full semester of course work in the student's program. Part of this examination will be a defense of the thesis research proposal developed by the student. The remaining portion of the examination should be used to determine the student's academic competence, the need for remedial non-credit course-work, and suitability for continued pursuit of the Ph.D. degree. The examination will normally be oral but, at the discretion of the committee, may contain a written portion. Results of the examination must be filed with the Graduate Coordinator within five (5) working days after it is administered. Normally, the results of the examination and an approved copy of the thesis research proposal will be filed at the same time. Students failing the examination may retake it one (1) time within a period of six (6) months from the date that it was first administered. Failure of the second examination will result in termination of the student's program. The rigor of this exam, outside

the defense of the proposal, is at the discretion of the student's major professor and advisory committee.

2. Qualifying examination. This is mandated by the Graduate College and is administered by the advisory committee in accordance with the procedures outlined in the Graduate College portion of the OSU catalog. The examination must contain both written and oral portions and is usually administered as part of the admission to Doctoral Candidacy.

3. Final examination. This is also mandated by the Graduate College and is administered by the advisory committee in accordance with the procedures outlined in the Graduate College portion of the OSU catalog. This exam is traditionally a part of the candidate's dissertation defense.

IX. Academic performance is usually considered to mean grade point average. However, academic performance also includes consideration of your suitability for conducting research, competency in your major field, and your rate of progress toward completion of the degree. All students in the Horticulture Graduate Program have an annual, written evaluation of academic performance to assess satisfactory academic performance (see section IX of this handbook). It is a disservice to students to allow them to continue toward the degree when they lack the necessary qualifications. Judgment regarding retention is made by your major professor and/or committee. If it is decided that you lack such standards, you may be asked to withdraw. The academic standard for course work is an overall grade point average of 3.0. Credits will not be awarded for courses in which a grade below "C" is earned, or for HORT 6000 credits in which a grade of "UR" is assigned. After you have completed a course, it cannot be dropped from your plan of study because of a low grade unless approved in writing by your advisor and the Dean of the Graduate College.

X. All requirements for the Crop Science Ph.D. degree must be completed within nine (9) years from initial enrollment in the degree program. Failure to complete the degree within these time limits will result in the loss of all credits that have become out dated. No course on the Plan of Study may be more than 10 years old at the time of graduation. Failure to demonstrate a normal interest in completing the degree may result in you being asked to withdraw your candidacy. These time limits are more than adequate and are generally applicable when a program of study has been interrupted. Normally, a Ph.D. degree can be completed in 8 to 12 semesters beyond the M.S. degree.

XI. Continuous enrollment is expected by all degree-seeking graduate students. Under certain circumstances a student may apply for a Leave of Absence, as described at the Graduate College website (<http://gradcollege.okstate.edu/resources/current-student-resources.html>). A Leave of Absence is not normally granted for a time period over one year and must be pre-approved prior to a lapse in continuous enrollment. Students applying for a Leave of Absence must seek approval in writing from the Graduate Coordinator or Department Head. If approved, they must also obtain approval from the Dean of the Graduate College for the Leave of Absence to take effect.

XII. Seminar: Two (2) credit hours of graduate seminar are required for Ph.D. candidates. Attendance at departmental seminars and presentation of two (2) seminars are required. The first seminar is to be a research proposal in which the student describes the research problem and outlines the planned research approach. The second seminar is to be a research results seminar in which the student summarizes the findings of the research. All Ph.D. students should

enroll in HORT 5020 for one credit hour each during the semester in which the proposal and the results seminars are to be given.

Programmatic Requirements: Doctor of Philosophy Degree in Plant Science - Horticulture

Procedures for prospective students are outlined on the Plant Biology web page and can be viewed at: <https://plantbio.okstate.edu/>

Requirements for the plan of study and research proposal are the same as those outlined for the Crop Science - Horticulture Ph.D. degree. Students develop a program in one of three (3) specialization areas: Cellular & Molecular, Organismal, and Ecological. Please refer to the Plant Science web page for specialization area requirements. See section IV. Degree Requirements for specific course requirements for the Horticulture option.

Programmatic Requirements: Doctor of Philosophy Degree in Environmental Science - Horticulture

Procedures for prospective students are outlined on the Environmental Science graduate web page and can be viewed at: <https://esgp.okstate.edu/degree-programs/doctoral-program>

Requirements for the plan of study and research proposal are the same as those outlined for the Crop Science - Horticulture Ph.D. degree.



Additional prerequisites: All students should have taken an upper division undergraduate ecology course before entering this program. If you have not taken this course, you will have to do so in addition to your Plan of Study requirements. This may require you to spend more time completing the degree requirements.

Skill Component: You, your advisor, and your graduate committee will determine how you will complete the skill component. The skill component may entail qualitative research methods such as in-depth interviews, participant-observation, content analysis, and others; quantitative (statistical) research methods; and/or a computer language or foreign language as would be appropriate to your research.

Concentration: The student will select a minimum of 27 credits in conjunction with his or her committee. These courses should emphasize the student's goals and reflect the biological, social, and physical aspects of the concentration area.

Level of Courses Applied to Graduate Degree: The Environmental Science Ph.D. degree requires approximately 75% of courses be taken at the 5000-6000 level and at least 15 hours of dissertation credit (HORT 6000). A few 3000-level courses are currently offered for graduate

credit. Although no firm rule exists at present stating that 3000 level courses cannot be used on the Plan of Study for Environmental Science degree, students are encouraged to minimize reliance on 3000 level courses.

The acceptance of work which the student desires to use toward the degree rests with the student's advisory committee. Because of this aspect of graduate work, it is wise for the student to complete a Plan of Study and get the advisory committee's approval as soon as possible.

Programmatic Requirements: Doctor of Philosophy Degree in Food Science - Horticulture

Students should use the guidelines described under Crop Science Ph.D. until the Food Science steering committee establishes guidelines. For more information visit

<http://foodsci.okstate.edu>

PLAN OF STUDY

A Plan of Study lists specific classes used to fulfill Horticulture Graduate Program requirements, along with the semester in which they will be taken, and must be submitted by the student online (Plan of Study forms and the submission process is available at the Graduate College website, <http://gradcollege.okstate.edu/resources/current-student-resources.html>). The Plan of Study form also identifies the student's Major Professor and Committee Members, who formally approve the class selection. The Graduate Coordinator then approves the Plan of Study and finally the Graduate College conveys final approval. All approvers have an opportunity to reject the plan for non-conformity with Program or Graduate College requirements; in case of rejection, the reasons for rejection are stated. It is the student's responsibility to correct the Plan of Study and re-submit for approval. Approved Plans of Study must be filed with the Graduate College prior to enrollment in the 17th hour for MS candidates and prior to enrollment in the 28th hour for Ph.D. candidates. Failure to meet this requirement will result in a hold in enrollment for the student by the Graduate College until an approved Plan of Study is completed. Only courses approved for graduate credit may appear on a Plan of Study; a student may be required to complete certain background classes to fulfill admission deficiencies or as a pre-requisite for a required class which is not approved for graduate credit. If a graduate section for the class is not available, the student may not receive credit on the Plan of Study. Tuition waivers will not be granted by the Graduate College or the Department for classes which are not approved for graduate credit.

Students wishing to graduate must submit a graduation clearance form, signed by their advisor, before the end of the second week (first week during summer semester) in their last semester. This form guides students through the process of verifying that degree requirements will be met. An extremely important step in this process is checking that courses listed on the Plan of Study have been taken and that the course prefix and number match those on transcript *exactly*. If a deviation in class selection, approved by the Major Professor, Committee Members and Graduate Coordinator, occurred during the student's study the Plan of Study must be modified and submitted to the Graduate College for final check. The graduation clearance form must be received by the Graduate College before a graduate student can apply for a diploma application with the Registrar's Office. Graduation Clearance Forms are available from the Graduate College Student Resource web page (<https://gradcollege.okstate.edu/resources/student-resources.html>).

GRADUATE ASSISTANTSHIPS

Graduate assistantships may be awarded on $\frac{1}{4}$ or a $\frac{1}{2}$ time basis, and are contingent on the availability of funds. Assistantship appointments are for one semester at a time, but can be renewed if performance is satisfactory. The stipend, activities, and enrollment are proportional to the percent of time designated by the assistantship. Out-of-state tuition is waived for graduate assistants on at least $\frac{1}{4}$ time. Since each graduate assistant is responsible to their major professor, responsibilities for each assistantship may vary. Enrollment in courses, credit load per term and other activities should have prior approval of your major professor. Assistantships are not 'grants' and your effort and time are required for the remuneration you receive. Graduate research assistants are paid to assist with the research on the project to which they are assigned. Research assistants can also serve as a teaching assistant (TA) for one or more semesters with the approval of their major advisor. Graduate teaching assistants are paid to serve as a TA during their graduate program and to assist with the research/formal report of their major advisor. The major advisor for the research/formal report usually serves as the TA mentor, but this is not a requirement. Students must have prior teaching experience or training before serving as TA. International students must score at least 28 on the speaking portion of the iBT TOEFL exam or pass the ITA and SPEAK exams. A student must have at least a 3.0 (B) grade point and an acceptable overall academic performance record to maintain an assistantship and graduate student status.

TUITION WAIVERS

Tuition Waivers for Teaching/Research Assistants. Students who are sufficiently employed as teaching or research assistants and are sufficiently enrolled receive resident tuition waivers. Assistants employed 0.50 FTE receive resident tuition waiver for Fall/Spring/Summer of 6/6/2. Students must complete a tuition waiver form online (<https://gradcollege.okstate.edu/resources/current-student-resources.html>) each semester and provide proof of submission to departmental staff.

GRADING POLICIES

Grading Model for Thesis/Dissertation Hours. Beginning Fall 2008, the grade of "R" will no longer be available for thesis or dissertation courses (5000/6000). Only the grade of "SR" (for satisfactory research) or "UR" (for unsatisfactory research) will be given. These grades are given in real time and are permanent.

Change in Incomplete Grade Policy. Beginning Fall 2008, faculty members will be asked to submit a default grade when assigning "I" grades. This default grade will be the grades given the student should they not complete any incomplete work prior to one year from the assignment of the "I" grade. Please note that this change is not specific to graduate courses but will be implemented university wide.

IV. DEGREE REQUIREMENTS

Matriculation in the Horticulture Graduate Program occurs in a specified sequence for both MS and Ph.D. candidates. Program requirements for coursework do not specify classes to complete; rather, the areas of expertise in which we expect our graduates to be proficient are specified. Each student should consult with their Major Professor, Graduate Committee and fellow students in determining classes which should be used to fulfill the requirements articulated below. The classes to be completed for all degree options should be pre-planned and must be articulated on the student's Plan of Study.

Coursework Requirements for the Horticulture MS (30 hours for plan A or 36 hours for plan B)

Students may participate in plan A (Horticulture Science) or plan B (Horticulture Practice) to obtain a Horticulture MS degree. While many course content requirements for either plan are identical, some differences exist and are articulated below:

1. A minimum of twenty-one (21) credit hours of course work at the 5000 level or above.
2. A minimum of 16 credit hours of course work in Horticulture and closely related fields (Plant and Soil Science, Botany, Natural Resources Ecology and Management).
3. A minimum of one (1) credit hour of graduate seminar, HORT 5020.
4. Six (6) credit hours of HORT 5000, Master's Thesis for Plan A. Students may enroll for more than 6 hours of HORT 5000, but only 6 hours may appear on a Plan of Study.

or

4. A minimum of two (2) and maximum of eight (8) credit hours of HORT 5110, Advanced Horticulture Problems for Plan B. Students may enroll in more than 8 hours of HORT 5110, but only 8 hours may appear on the plan of study.
5. A minimum of three (3) credit hours of Statistics at the 5000 level or above for students in Plan A or on the combined Bachelor's and Master's degree programs for students in Plan B.
6. A maximum of nine (9) semester credit hours earned at another institution may be counted toward the M.S. Degree at OSU with the approval of the Advisory Committee.
7. Courses taken on a Pass-No Pass basis cannot appear on a Plan of Study.
8. Degree candidates must complete at least 21 credit hours of 5000 and 6000 level courses taken through Oklahoma State University.

Coursework Requirements for the Crop Science PH.D. (60 hours)

The Crop Science Ph.D. is administered through the Plant and Soil Science Department. Admission and general coursework requirements for students pursuing a Horticulture emphasis are consistent with this Program and include:

1. A Minimum of ten (10) credit hours of Horticulture or Plant and Soil Science courses at the 5000 level or above, excluding seminar and thesis, are required on the combined M.S. and Ph.D. programs.
2. A student with an M.S. degree or equivalent will not receive graduate credit for 3000 level Horticulture or Plant and Soil Science courses taken during the Crop Science Ph.D. program.
3. A minimum of nine (9) credit hours of statistics at the 4000 level or above are required on the combined M.S. and Ph.D. programs.

4. A minimum of nine (9) credit hours at the 5000 level or above of Botany, Plant Pathology, Entomology, or combinations of these disciplines.
5. A minimum of three (3) credit hours of a computer programming /application course. Experimental Horticulture (HORT 5233) or a STAT class involving use of SAS or related statistical analysis program can satisfy this requirement.
6. A minimum of three (3) credit hours of Biochemistry at the 3000 level or above.
7. Three (3) credit hours of graduate seminar taken subsequent to receipt of B.S. degree.
8. A minimum of fifteen (15) and a maximum of twenty (20) credit hours of HORT 6000, Doctors Thesis.

Coursework Requirements for the Plant Science Ph.D.

The Plant Science Ph.D. is administered through the Botany Department. Admission and general coursework requirements for students pursuing a Horticulture emphasis are consistent with this Program and include:

1. Seminar (2 credits): Research proposal and final research seminar, to be taken within the home Department.
2. Diversity (6-8 credits): One (1) course in each of the two specialization areas not selected. Courses must be approved for graduate credit, and at least one (1) course must be taken in residence.
3. Quantitative Skill (3-4 credits): Statistics, biochemical methods, computer language, experimental design, quantitative analysis, etc.
4. Courses in the following areas are required but may be omitted if taken previously at the undergraduate or graduate level as determined by the Advisory Committee:
 - Ecology
 - Genetics
 - Plant Anatomy & Morphology
 - Plant Classification & Taxonomy
 - Plant Physiology

Coursework Requirements for the Environmental Science Ph.D.

Environmental Science – Horticulture Plans of study must coordinate with the Environmental Science curriculum. The Environmental Science Graduate Program is a multidisciplinary program with no home Department. Students are encouraged to view the Environmental Science web page for course information (<https://esgp.okstate.edu/degree-programs/doctoral-program>).

Coursework Requirements for the Food Science Ph.D.

Food Science-Horticulture Plans of Study must coordinate with the Food Science curriculum. The Food Science Graduate Program is a multidisciplinary program with no home Department. Students are encouraged to view the Food Science web page for course information (<http://foodsci.okstate.edu/programs>).

MATRICULATION

Graduate College policy states: “Graduate students are expected to demonstrate a planned and orderly program for matriculation as indicated by enrollment. Every student is expected to satisfactorily complete no less than six (6) semester credit hours during the academic year (Fall,

Spring, and Summer). Students may satisfy this requirement by enrolling for the required hours during only one term or by continuous enrollment during the three semesters.” All students are expected to be enrolled in at least two (2) credit hours while making use of OSU facilities or while working with faculty. Students must be enrolled in the semester in which they graduate. Enrollment requirements for full-time status in the last semester of the program are different from other semesters – a student may enroll in two (2) hours of credit during their final semester and be considered full time.

Minimum: Graduate students should be aware that there are many factors that determine what the minimum number of hours of enrollment should be. Among these factors are assistantships, visa status, financial aid, and graduation requirements. Students and faculty should note that semester enrollment deadlines are strictly enforced, and thesis, dissertation, special readings or independent study courses cannot be added after this deadline passes. Students wishing to graduate should also be aware that they are required to enroll in at least 2 hours in their last semester and at least 6 hours in the last year (last three semesters/sessions, including summer). Since enrollment requirements vary with assignment, students should check the Graduate College web site for specific requirements for their situation (<http://gradcollege.okstate.edu/>).

Maximum: Graduate students may enroll in a maximum of 16 hours toward their degree during each fall or spring semester. Requests for exceptions to this requirement should be directed to the Dean of the Graduate College, and should be supported with clear evidence indicating the student’s capability to carry an excessive course load.

Full-Time Status: Some graduate students may be required to maintain full-time student status. International students are required nine (9) hours enrollment in the spring and fall, and three (3) hours in the summer to be certified as full-time, unless they have an assistantship appointment. U.S. and international students that have at least a .50 FTE assistantship appointment have full-time status with a minimum of six (6) hours during the fall or spring, and two (2) hours during the summer. A .25 FTE assistantship requires nine (9) hours enrollment in spring and fall, and three (3) hours in the summer for full-time status.

Because regulations pertaining to enrollment requirements for a particular purpose may change, students are urged to consult the Graduate College (<http://gradcollege.okstate.edu/>) and/or International Student and Scholars (<http://iss.okstate.edu/>) for timely updates.

Time to Degree Guidelines

While an absolute time table for degree completion is impossible to advocate since each student’s progress-to-degree is unique, a guideline for typical accomplishments follows:

Horticulture MS candidates

Students may enter the Horticulture MS Graduate Program in the Fall, Spring or Summer semester. This impacts when during a calendar year accomplishment should occur. For purposes of illustration, typical accomplishments are described as time in matriculation within our Program.

Year 1 – The first semester of matriculation is typically spent familiarizing yourself with your Major Professor’s research program and defining how your research project will fit within the program. Towards the end of the first semester the student should begin formulating a Graduate Committee and reviewing literature pertaining to their research project (with consultation from their Major Professor and Graduate Committee members). By the end of the first semester and

beginning of the second semester the student develops a written research proposal composed, at a minimum, of an introduction (a survey of literature pertinent to the research topic, a description of the research topic and culminating in a list of specific research objectives), materials and methods (how and with what the research will be conducted) and expected results (what answers to the stated objectives will be obtained, how unexpected results may be handled and a presentation of any data obtained to date). Typically, students develop a Plan of Study during this same time and submit the Plan of Study for faculty and Graduate College approval. Although not a Program requirement, many students organize a committee meeting to solicit input for the proposed research and course selection for the Plan of Study from the committee by the end of the second semester. The Plan of Study must be submitted prior to enrollment in the 17th hour of coursework, which corresponds to the beginning of the second year in the Graduate Program.

Year 2 – Research projects should be well underway by this time and coursework required for the degree should be documented in an approved Plan of Study. Students typically complete their research in one and one half years but may require two years to complete their project. Statistical analysis of data is completed during and immediately following data acquisition. Students are urged to start writing their thesis three to four months prior to its due date to the Graduate College (for specific timelines consult the Graduate College website (<http://gradcollege.okstate.edu/>)). Thesis workshops are offered on a timely basis from this resource. If a student is pursuing a Horticulture MS under plan B, the formal report substitutes for the thesis. Formal reports can vary in structure but must be peer reviewed.

All Horticulture MS students present a results seminar during their last semester, coincident with completion of the thesis and optimally just before the thesis (or formal report) defense. Students should enroll in one (1) hour of credit in HORT 5020 for this semester. Students must also complete a graduation clearance form, signed by their advisor, before the end of the second week (first week during summer semester) in their last semester. The thesis (or Formal report) defense must be scheduled and completed by Graduate College deadlines in order for the student to graduate in any given semester. Students must file a “Thesis/Dissertation Oral Defense Form” with the Graduate College immediately following the thesis defense (students are urged to make a digital or paper copy of this form prior to submission). For purposes of graduation during any given semester, the Graduate College maintains strict deadlines on their website (see link above) for submission of a graduation clearance form, submission of the draft and final thesis documents and for submission of the oral defense form. It is the responsibility of the student to assure all deadlines are met for graduation in any given semester.

Many of the milestones listed above also apply for Ph.D. candidates participating in Horticulture through the Crop Science, Plant Science, Environmental Science and Food Science Graduate Programs. Some important differences include a later deadline to complete an approved Plan of Study (before enrollment in the 28th hour of coursework which is usually before the end of the third full semester of study), necessity to enroll in two hours of HORT 5020, Seminar (credit is received for both the proposal and the results seminar), a requirement for 60 hours of coursework after the MS degree and a more in-depth inclusion of committee members in the research and academic programs for the student.

One other substantial difference between MS and Ph.D. student programs is the requirement for two oral examinations to be administered during the Ph.D. program. While both MS and Ph.D. candidates must present and defend a thesis at the end of their Graduate Program, only Ph.D. students are required to participate in a Comprehensive Examination. The Comprehensive Examination is completed within the third year of a student's Graduate Program and has both written and oral components administered by each Committee Member and Major Professor covering a broad area of science related to the candidate's chosen field of study. The written portion of the examination is completed first, usually as a response to questions administered independently by Committee Members and Major Professor. The oral examination usually seeks clarification of the student's answers to the written examination. If Committee Members and Major Professor agree that the student passes the Comprehensive Examination they sign an "Admission to Doctoral Candidacy" form available from the Graduate College website (<http://gradcollege.okstate.edu/>) which must be filed with the Graduate College at least six (6) months prior to graduation. Continuous enrollment requirements for Doctoral candidates who have submitted an approved "Admission to Doctoral Candidacy" form is two (2) hours per semester.

A complete list of forms provided by the Graduate College can be found at <https://gradcollege.okstate.edu/resources/current-student-resources.html>.

V. SELECTION OF THESIS/DISSERTATION RESEARCH ADVISOR

Graduate student success is largely dependent on a positive mentoring experience with the Advisor (Major Professor) working in conjunction with the Advisory Committee. When your application for graduate studies is reviewed within the department, an effort is made to place you with a faculty member who has interests similar to yours. Our Horticulture Graduate Program strongly encourages prospective students to identify a faculty member they would like to have as Major Professor as a component of the Statement of Purpose in their application for admission. This faculty member will be your major professor.

If your Major Professor is not involved in your area of interest or you desire a change for other reasons, the change should be requested early in the graduate training program. Plans for changing major professors should be discussed with the Department Head and Graduate Coordinator prior to initiation. Before relations with your major professor are severed, be sure that another faculty member is willing to serve as your advisor. Graduate assistantships are normally associated with specific projects and are not usually transferable from one faculty member to another.



Some students desire to study the same area of specialization through the M.S. and Ph.D. programs. Many times, however, a change of interest between the M.S. and Ph.D. degrees makes a change in major professors desirable. In such instances, the prescribed procedure for changing advisors should be followed.

Your major professor may require you to spend a certain amount of time on his/her research programs either as part of your graduate training or as part of your assistantship responsibilities. This is valuable training which may be essential in your research. You should seek such training rather than waiting until your major professor requires you to become involved.

The Graduate College has published “Best Practices in Graduate Education” describing the role of Committee Chair, Thesis Advisor and Graduate Committee separately for MS and Ph.D. candidates. These practices are reproduced below:

MS candidates:

Upon recommendation of the graduate program and approval of the dean of the Graduate College, an Advisory Committee of no fewer than three voting members of the Graduate Faculty will be appointed. The roles of the Advisory Committee members are Chair, Advisor and Expert Member(s). The general duties of the Advisory Committee include advising the graduate student and assessing the student’s progress as follows: (1) meeting regularly, (2) assisting with developing the POS as well as its approval and revisions, (3) assisting with the planning, conducting and/or redirecting of the research, (4) supervising the writing of the research document (i.e., thesis, final report, or formal report), (5) conducting the defense of the research

document, and (6) approving the final research document. The student and the members of the Advisory Committee should consult regularly to review the progress of the student's work.

Chair: The Chair's primary responsibility is to monitor the progress of the student toward degree completion. In the case of research degrees, the Chair is commonly the research Advisor, but this is not a requirement. Irrespective of other considerations, the Chair must have a strong familiarity with the academic requirements appropriate to the degree sought. The Chair must hold an appropriate OSU Graduate Faculty appointment, typically a tenure-track appointment in the academic unit in which the graduate degree is housed. The Chair's duties include convening meetings of the Advisory Committee, as appropriate; ensuring compliance with University and Graduate College policies, procedures and requirements; overseeing the POS and research document submission processes; and ensuring that the research topic undertaken is appropriate to satisfy degree requirements with the results openly accessible. The Chair serves as the representative of the Graduate College and ensures a high level of integrity in the processes that the Advisory Committee utilizes to review and evaluate the student throughout the graduate program. If the Chair is not also the Advisor, the Chair should serve as a liaison with the Advisor with regard to progress of research in fulfillment of degree requirements.

When the Advisor is not a member of the OSU faculty, the Chair should ensure compliance with applicable research regulations, such as Responsible Conduct of Research training and Institutional Review Board (IRB) requirements for research involving human subjects.

Advisor: The Advisor's primary responsibility is as a mentor. As a result, it is expected that the Advisor establish the closest working relationship with the student. As mentioned previously, the Advisor is typically the primary resource for the graduate student in identifying potential committee members for the student's Advisory Committee. The Advisor may also serve as the Chair of the Advisory Committee. The Advisor must hold an appropriate OSU Graduate Faculty appointment, but need not hold an OSU faculty appointment if not serving as Chair. The Advisor guides and counsels the student in the research or scholarly effort, ensuring compliance with applicable research regulations, such as Responsible Conduct of Research training and Institutional Review Board (IRB) requirements for research involving human subjects. The Advisor is responsible for reporting to the Advisory Committee on the student's progress. It is the Advisor's responsibility to mentor the student toward a research, scholarly or creative project that is original and worthy of the degree sought. The Advisor is typically involved in the preparation of scientific or creative presentations, manuscripts for publication, etc. which may be a degree requirement in some graduate programs.

Ph.D. candidates:

Upon recommendation of the graduate program and approval of the dean of the Graduate College, an Advisory Committee of no fewer than four voting members of the Graduate Faculty will be appointed. The roles of the Advisory Committee members are Chair, Advisor, Expert Member(s) and Outside Member. The general responsibilities of the Advisory Committee include advising the graduate student and assessing the student's progress as follows: (1) meeting regularly, (2) assisting with developing the POS as well as its approval and revisions, (3) preparing and examining the student for candidacy, (4) assisting with the planning, conducting and/or redirecting of the research, (5) supervising the writing of the dissertation, (6)

conducting the dissertation defense, and (7) approving the final research document. The student and the members of the Advisory Committee should consult regularly to review the progress of the student's work.

Chair: The Chair's primary responsibility is to monitor the progress of the student toward the degree completion. The Chair is commonly the research Advisor, but this is not a requirement. Irrespective of other considerations, the Chair must have a strong familiarity with the academic requirements appropriate to the degree sought. The Chair must hold an appropriate OSU Graduate Faculty appointment, typically a tenure-track appointment in the academic unit in which the graduate degree is housed. The Chair's duties include convening meetings of the advisory committee, as appropriate; ensuring compliance with University and Graduate College policies, procedures and requirements; overseeing the POS and dissertation submission processes; and ensuring that the research topic undertaken is appropriate to satisfy degree requirements with the results openly accessible. If the Chair is not also the Advisor, the Chair should serve as a liaison with the Advisor with regard to progress of research in fulfillment of degree requirements.

When the Advisor is not a member of the OSU faculty, the Chair should ensure compliance with applicable research regulations, such as Responsible Conduct of Research training and Institutional Review Board (IRB) requirements for research involving human subjects.

Advisor: The Advisor's primary responsibility is as a research mentor. As a result, it is expected that the Advisor establish the closest working relationship with the student. The Advisor may also serve as the Chair of the Advisory Committee. The Advisor must hold an appropriate OSU Graduate Faculty appointment, but need not hold an OSU faculty appointment. The Advisor guides and counsels the student in the research effort, ensuring compliance with applicable research regulations, such as Responsible Conduct of Research training and Institutional Review Board (IRB) requirements for research involving human subjects. The Advisor is responsible for reporting to the Advisory Committee on the student's research progress and hooding the student at commencement. It is the Advisor's responsibility to mentor the student toward a research project that is original and worthy of the degree sought. The research Advisor is typically involved in the preparation of presentations and manuscripts for publication, which may be a degree requirement in some graduate programs.

Should a student's Research Advisor leave OSU before the student completes his/her degree, the following steps may be taken after consultation with the Research Advisor and Graduate Program Coordinator:

- For a master's student or doctoral candidate who need only complete their research project to finish the degree, the student may complete the research project under the direction of the original Research Advisor. If the Advisor is also the Chair of the student's Advisory Committee, a new Chair would be appointed. The original Research Advisor can continue as a member of OSU's Graduate Faculty, participate in the student's thesis/dissertation defense, and fulfill his/her obligations to the student.

- For a master's or doctoral student (defined as not having met the requirements for doctoral candidacy) who is in the early stages of their program and research project, he/she may choose a new Advisor and start a new research project.
- A student may also choose to transfer to the advisor's new educational institution.

If a student is unable to secure a new Advisor in 30 calendar days, there is no obligation on the part of the program, Graduate College or Oklahoma State University to provide a new one. Without an Advisor the student will not be eligible to continue in the graduate program.

Student-Advisor Relationship: In the unlikely event that it is determined that a graduate student and Advisor can no longer work together, and all efforts for conflict resolution within the program have been exhausted, it is the responsibility of the student to identify a new Advisor or change to another degree option or program. The Graduate Program Coordinator can assist with this process, but Oklahoma State University is under no obligation to provide the student a new Advisor. If a new Advisor cannot be identified in 30 calendar days, the student will no longer be eligible to continue in the graduate program.

VI. THE ADVISORY COMMITTEE

The Advisory Committee actively participates in the education and training of graduate students. This includes sharing responsibility for reviewing the student's progress and guiding the student toward completion of their program requirements. Recommendation of Advisory Committee members should be a collaborative activity between the graduate student and their Major Professor and/or Committee Chair. Although the student has the ultimate responsibility for recommending his/her Advisory Committee membership, his/her Advisor is a valued resource that can provide insight that will help the student make informed decisions. The student should meet with potential Advisory Committee members prior to recommending them to better understand their experience, availability, mentoring style and willingness to serve as an Advisory Committee member. Recommendations for Advisory Committee membership should be based on expertise of the faculty member and his/her ability to positively contribute to the graduate student's education and not departmental affiliation or other intangible factors or perceptions.

Your major professor may serve as chairman of the Advisory Committee. In order to serve as the chair of a Ph.D. committee, a faculty member must have doctoral chairing privileges. However, the chair need not be the research advisor (Major Professor). For example, an assistant professor without doctoral chairing privileges can still advise graduate students as research adviser, but not as committee chair.

M.S. Degree

The advisory committee, consisting of your major professor and at least two (2) other graduate faculty members (with at least one member from within the Horticulture and Landscape Architecture Department and the third member from within or outside the Horticulture and Landscape Architecture Department) should be established early in your program. It must be established and indicated on a submitted Plan of Study before the third semester of enrollment. Since the committee can assist you in planning your program of study, in conducting your research and meeting the requirements of the degree, it is recommended it be chosen early in your program of study, usually prior to the end of the second semester of study. It is also recommended that you consult frequently with the committee.

Ph.D. Degree

A Ph.D. advisory committee is to be composed of at least four (4), preferably five (5), graduate faculty members with at least one (1), preferably two (2), from outside the Department of Horticulture and Landscape Architecture; one (1) must be from the Department of Plant and Soil Sciences if the degree is pursued through the Crop Science-Horticulture Ph.D. program.

The advisory committee functions are to (1) assist in planning the program of study and research, (2) approve the final program of study, (3) participate in guidance, (4) administer the written or oral qualifying and final examinations, and (5) aid in research. You should work closely with the members of your advisory committee. Frequent consultation is essential. They can provide you with valuable assistance in your selection of courses, planning, and interpretation of research data.

The roles, responsibilities and qualifications of Major Professor and Committee Members are:

Chair: The primary responsibility of the Chair of a graduate student's Advisory Committee is to monitor the progress of the student toward degree completion. The Chair is commonly the research Advisor, but this is not a requirement. The Chair must have a strong familiarity with the academic requirements appropriate to the degree sought. The Chair must hold an appropriate OSU Graduate Faculty appointment, typically a tenure-track appointment in the academic unit in which the graduate degree is housed. The Chair's duties include convening meetings of the Advisory Committee, as appropriate; ensuring compliance with University and Graduate College policies, procedures and requirements; overseeing the Plan of Study and thesis/dissertation submission processes; and ensuring that the research topic undertaken is appropriate to satisfy degree requirements with the results openly accessible. If the Chair is not also the Advisor, the Chair should serve as a liaison with the Advisor with regard to progress of research in fulfillment of degree requirements.

Expert Committee Member(s): The Advisory Committee must include at least one Expert Member whose expertise and counsel serve the graduate student in attaining the research, scholarly, creative or professional preparation goal that is worthy of the degree sought. Expert Members must hold an appropriate OSU Graduate Faculty appointment. Typically, such individuals are faculty members in the student's graduate program. An Expert Member's responsibilities include guiding the research, scholarly or creative activities throughout the process, approving the Plan of Study, reviewing draft documents, attending regular meetings of the Advisory Committee, and interacting regularly with Advisory Committee members to facilitate and monitor degree completion progress.

Outside Committee Member: The Advisory Committee must also include one *Outside Member* who serves as the representative of the Graduate College and ensures a high level of integrity in the processes that the Advisory Committee utilizes to review and evaluate the student throughout the graduate program. The Outside Member must be a member of the OSU faculty and Graduate Faculty. The Outside Member must not be a faculty member from the academic unit or graduate program of either the graduate student, Advisor or the Chair of the Advisory Committee. The Outside Member ensures that appropriate academic standards are applied in evaluating the student, and that the student is dealt with in a fair manner consistent with OSU policies. The Outside member also provides expert advice when appropriate to the student in the conduct of research and writing of the dissertation.

VII. PROGRAM MILESTONES

Your progress through the Horticulture Graduate Program is a concerted effort between yourself, your Major Professor and your Advisory Committee; ultimately it is the student's responsibility to meet all deadlines associated with degree completion. This handbook has previously provided milestones associated with our Graduate Program. For purposes of simplicity a synopsis of these milestones, suggested time for completion and required time for completion follows:

Horticulture MS

<u>Milestone</u>	<u>Suggested Completion</u>	<u>Required Completion</u>
Major Professor selection	Within application for admission	30 days after admission
Committee Selection	Before completion of the second semester	Before enrollment in the 17th hour of coursework
Presentation of thesis proposal and seminar	Before completion of the second semester	Before enrollment in the 17th hour of coursework
Plan of Study submission	Before enrollment in the 17 th hour of coursework	Before enrollment in the 17th hour of coursework
Research completion	One and one-half to two years after Program admittance	Consult with Major Professor
Thesis/Formal report Composition	Start just prior to completion of research data acquisition	Consult with Major Professor
Presentation of results seminar	During semester of graduation	Consult with Major Professor
Thesis defense completion	Two to two and one-half years after Program admittance	Seven years after Program admittance
Final semester graduation deadlines	See Graduate college checklist for MS candidates (https://gradcollege.okstate.edu/resources/current-student-resources.html)	

Horticulture Ph.D. options:

There is some variance in requirements for each Ph.D. Program – see websites for specific Programs to verify that all requirements are met. A general list of milestones follows:

<u>Milestone</u>	<u>Suggested Completion</u>	<u>Required Completion</u>
Major Professor selection	Within application for admission	30 days after admission
Committee Selection	Before completion of the third	Before enrollment in the 28th

	semester	hour of coursework
Presentation of thesis proposal, seminar, preliminary examination	Before completion of the second semester	Before completion of the third semester
Plan of Study submission	Before enrollment in the 28 th hour of coursework	Before enrollment in the 28 th hour of coursework
Completion of Comprehensive examinations (Application for Doctoral Candidacy)	Two and one-half years after Program admittance	Six months prior to graduation
Research completion	Two and one-half to three years after Program admittance	Consult with your Major Professor
Presentation of results Seminar	During semester of graduation	Consult with your Major Professor
Thesis defense completion	Three to three and one-half years after Program admittance	Nine years after Program admittance
Final semester graduation deadlines	See Graduate college checklist for MS candidates https://gradcollege.okstate.edu/resources/current-student-resources.html	

Required Examinations: The Horticulture Graduate Program requires that all students complete the GRE prior to admittance into the Program. Although no minimum score is required for admittance, students who score above a 300 on this exam are more competitive for Assistantship funding. During matriculation in the Horticulture Graduate Program required examinations include one (1) formal examination for MS candidates (the thesis defense) and two (2) formal examinations for Ph.D. candidates (the written/oral comprehensive exam and the dissertation defense). Optional examinations for both MS and Ph.D. candidates include the preliminary examination (normally given during the proposal presentation to the committee) and the qualifying exam for Ph.D. candidates (given after the proposal presentation and prior to the comprehensive exam). Optional examinations are administered at the Major Professor's or Committee's discretion and are meant to assess a candidate's competency in their chosen area of study.

Required Extracurricular Participation: Outside formal coursework and thesis research activities students are encouraged to participate in a variety of activities which can enhance their learning in the Horticulture Graduate Program. Some examples are assisting fellow students with their research projects, assisting with departmental programs in teaching and extension, becoming a departmental representative to the Graduate and Professional Student Government Association (GPSGA), etc. In addition, students are required to attend seminar to gain knowledge of what fellow students are accomplishing, what faculty programs are ongoing and to

become familiar with current topics. Both MS and Ph.D. students are required to present a proposal seminar and a results seminar; MS students enroll in HORT 5020 for one (1) hour of credit for the results seminar only while Ph.D. students enroll for both the proposal and the results seminar. Publication of results in peer reviewed journals is expected of both MS and Ph.D. candidates. This normally occurs in consultation with the Major Professor after the final draft of the thesis or dissertation has been submitted.

Requirements for Admission to Doctoral Candidacy: The comprehensive examination is used to assess the fitness of each candidate to be admitted for Doctoral Candidacy. This exam is composed of a written component, submitted from each committee member and Major Professor, and an oral component usually to clarify submitted answers to the written exams. The comprehensive exam is broader than the student's research area and provides an opportunity for the student to demonstrate critical thinking in areas of knowledge pertaining to a broadened scope of scientific inquiry. Ph.D. candidates may visit with examiners prior to administration of the exams to gain insight into areas of inquiry; each examiner has the prerogative to administer the written exam as open or closed book and time limits for completing their portion of the exam. The Ph.D. candidate should bring the "Admission to Doctoral Candidacy" (available from the Graduate College website) form to the oral examination. Immediately after the oral examination the Major Professor and Committee members concur on satisfactory or unsatisfactory completion and indicate their preference by signing the form in the appropriate location. Satisfactory completion indicates admission to Doctoral Candidacy; unsatisfactory completion indicates non-admission. In the case of unsatisfactory completion, the student may re-take the comprehensive examination within six (6) months to achieve satisfactory admission. If a student fails to achieve satisfactory admission on a second, try they are removed from the Horticulture Graduate Program.

VIII. THESIS/DISSERTATION AND DEFENSE

The thesis/dissertation defense is held after completion of thesis/dissertation in draft form. Students are encouraged to attend a Thesis/Dissertation workshop presented by the Graduate College early in the semester and prior to composition of the thesis or dissertation to become aware of any requirements for submission of the document and to become apprised of deadlines (<https://gradcollege.okstate.edu/resources/current-student-resources.html>).

The student and Major Professor have worked on the document to that point and they have concurred it is in appropriate form to forward to the committee. The defense may be scheduled no earlier than two (2) weeks after submission of the thesis/dissertation draft to the committee – students are encouraged to communicate with Committee Members well in advance of document submission to assure they will be available for the defense. The purpose of the thesis/dissertation defense is to provide suggestions for improvement to students for their written document from the Committee as a whole and to allow the student to provide clarification for any questions pertaining to their work. The results seminar, open to all students and faculty, may be a part of the defense or it may be held at a separate time. Students are not required by the Horticulture Graduate Program to provide a summary presentation of their results preceding the defense but students are encouraged to counsel their Major Professor as to the need for such a presentation. The thesis/dissertation defense is administered by the Major Professor and Committee.

Students participating in The Horticulture Graduate Program for the MS degree under plan B (Formal report) must meet the same deadlines and requirements as those participating in plan A (thesis). Flexibility is afforded the composition and format of the “Formal report” but the Program requires that the end product be peer reviewed. Students and Major Professors are encouraged to have plans for the Formal report approved by the Graduate Coordinator and/or Department Head at time of submission of the proposal to assure the project meets departmental requirements for peer review.

The outside committee member on a Ph.D. committee has responsibilities to assure that the student’s educational and research experiences are well rounded in areas outside of their specific discipline. The outside committee member may not be a member of the Horticulture and Landscape Architecture Department and must be a full member of the Graduate Faculty at Oklahoma State University. Other duties of the outside member are summarized in best practices documents at the Graduate College website (<https://gradcollege.okstate.edu/resources/current-student-resources.html>).

All students should bring a copy of the “Thesis/Dissertation Oral Defense Results” form (available from the Graduate College website) to the defense. Immediately following the defense, the Major Professor and Committee members indicate satisfactory or unsatisfactory completion by signing the appropriate location on the form. If satisfactory completion is indicated, the student has passed the defense and should immediately deliver the form to the Graduate College. Students are urged to make digital and/or photo-copies of this document prior to delivery. If unsatisfactory completion is indicated the student may re-schedule a defense, incorporating any deficiencies which led to the unsatisfactory decision, within six (6) months of that date. If a second unsatisfactory rating is achieved, the student is dropped from the Horticulture Graduate Program.

IX. PROGRAM POLICIES: ACADEMIC PERFORMANCE

All graduate students in the Horticulture Graduate Program are expected to maintain at least a 3.00 grade point average, achieve at least an “S” grade in courses so graded and achieve an “SR” grade in all HORT 5000 or HORT 6000 (research hours) which count towards credit for their respective degrees. Any grade lower than a “C”, “S” or “SR” will not count towards graduation and must be re-taken to obtain an acceptable grade. Students should be aware that if a course is retaken any applicable tuition waiver may not be applied for that course.

Graduate Student Annual Academic Progress Review: In accordance with Graduate College general policy and the policy requiring that a graduate student be making satisfactory academic progress to hold an assistantship, the Horticulture Graduate Program conducts an annual review of graduate students enrolled in a degree-seeking program. Additionally, an annual review helps the student progress through the graduate program by allowing timely identification of deficiencies, clarification of expectations for academic performance, and/or identification of opportunities for continued success. The Horticulture Graduate Program uses annual reviews not only to monitor student progress toward the degree but to also assess satisfactory performance for continuation on assistantships, fellowships and scholarships. A copy of the Horticulture Graduate Program Graduate Student Annual Academic Progress Review form can be found at the end of this section.

Suggested Timeline:

- On June 1, the Graduate Secretary sends out an email requesting an evaluation of each student enrolled in the Horticulture Graduate Program to all enrolled degree-seeking students in the program. The form requests information on the student’s academic accomplishments and on the completion of specific program requirements.
- Students fill out the form within two weeks and forward it to their Major Professor.
- The Major Professor reviews the information provided by the student and provides a written evaluation of the student’s performance. The Major Professor may use the form to set goals for the coming academic year and as a cross-check of satisfactory progress to degree. The Major Professor and student meets and discusses progress and, if necessary, any steps to be taken to correct lapses in progress. The completed evaluation is due to the Graduate Secretary by July 15.
- Copies of forms will be transmitted to the Graduate Coordinator by July 20 for approval. If satisfactory progress is indicated no further action other than filing in the student’s records is warranted. If un-satisfactory progress is indicated a plan for correcting any deficiencies should be indicated and agreed to by the Major Professor and student, and acknowledged by the Graduate Coordinator.
- The student is provided with a written copy of their annual review. The student and Major Professor meet to discuss the outcome of the review.
- The Graduate Secretary places the signed original of the review in the student’s file.
- In the case of unsatisfactory progress, the student must receive written documentation of the issues and expected remediation. The Graduate Dean is copied on this correspondence.

- Ideally, the graduate program provides the Graduate College with an aggregate summary of all reviews.

Program policy for undergraduate courses taken which are not approved for graduate credit: The Horticulture Graduate Program recognizes that certain courses may be needed for a student’s academic background which is not approved for graduate credit. These courses may be required for admittance into the Program or they may be taken during the student’s academic program to fulfill a deficiency in background, etc. Within the Horticulture Department such courses can be offered as a graduate section by enrolling in HORT 5110 for the identical number of hours as the course – in such a case students are normally required by the instructor to complete work in addition to what undergraduate students complete to justify the higher classification for the course. If a class is taken which is not approved for graduate credit and a graduate section for the class is not available, students should be aware that a tuition waiver will not be approved by the Graduate College. The Horticulture Graduate Program does not accept liability for a tuition waiver which is not covered by the GPSGA tuition waiver program.

Dismissal from the Horticulture Graduate Program: Graduate students may be dismissed from their program for failure to meet academic standards. In such instances, the students will be notified of the intent to dismiss and informed of their rights for due process and appeal (*See section XII. Appeals Processes*). If a student appeals the decision to dismiss, s/he must be allowed to maintain enrollment and continue working toward the graduate degree in the same manner as any other graduate student in the program during the appeals process. Continued enrollment is not required to appeal. Once the decision of the appropriate appeals panel is made, it will be final.

Continuous Enrollment and Leave of absence policy: Oklahoma State University (OSU) graduate students are expected to maintain active status through continuous enrollment from the time they matriculate until they graduate. Students who are not able to maintain active status are strongly encouraged to consult with their program, advisor, and Graduate College to determine whether requesting a leave of absence (LOA) is the most appropriate course of action. International students must consult with the International Students and Scholars (ISS) office to ensure compliance with Federal immigration policy. Example situations that may lead a student to explore a leave of absence request are medical, personal, employment and military service. Students who do not have an approved leave of absence and are not continuously enrolled may experience negative consequences related to academic, visa, financial aid, and other student issues – see University policies and guidelines for additional information. A student status of “good standing” (academic and conduct) is generally required for a leave of absence.

1. Students who experience circumstances that prevent them from maintaining active student status may be granted approval from the Graduate College for a leave of absence upon request. Students must complete a Leave of Absence form that specifies the length of the leave requested.
2. An approved leave of absence may not exceed one academic year, unless there are exceptional circumstances.
3. Students who do not obtain an approved leave of absence prior to interrupting their enrollment

(excluding summer) may be terminated from their graduate program and/or held to new requirements if they are subsequently readmitted.

4. Students granted a leave of absence may not use University facilities or services available only to enrolled students.

5. The approved leave of absence time will not be counted toward time-to-degree limits.

6. Students who obtain an approved leave of absence in accordance with this policy are eligible for reinstatement provided they re-enroll no later than the term immediately following the expiration of the leave (excluding summer). Programs may specify reasonable conditions for reinstatement to active status, whether the student returns early or at the expiration of the leave. Programs may deny reinstatement to active status based on crimes or other serious misconduct occurring during the leave that would have been grounds for suspension or expulsion had the student engaged in the conduct while enrolled. Students are obligated and agree to disclose such material information. See OSU Student Code of Conduct.

7. Students whose leave of absence has expired and who have not yet registered for the following term (excluding summer) will be placed on inactive status. Students who are placed on inactive status must reapply for readmission.

Horticulture Graduate Program Annual Review of Graduate Students

Student Name:

Degree and degree plan sought:

Date entered current degree program:

Current cumulative Grade Point Average:

PART A: Student Self Report and Self Assessment (to be completed by the student)

1. List all course work completed and grades. A copy of transcripts for the previous year can suffice. A plan of Study should be submitted with grades filled in. If a Plan of Study has not yet been submitted and approved, indicate when it will be completed.
2. List all exams completed (e.g., program qualifying or comprehensive exam, Graduate College preliminary exam or final defense). Include committees formed, exams scheduled and exam results during the last year. Indicate seminar presentations and identify proposal or results seminar.
3. List other milestones completed (e.g., internships, practical training) during the last year.
4. List the status of thesis/dissertation/creative component project. Describe progress in the last year.
5. List GTA/GRA service during the last year and outcomes (e.g., teaching evaluations or research progress).
6. List fellowships held during the last year.
7. List Professional Activity (e.g., papers, presentations, recitals, shows, or publications) during the last year.
8. List honors, awards, competitive scholarships, or other recognitions during the last year.
9. List extenuating circumstances during the past year, if applicable.

Signature of Student and Date written review prepared: _____

PART B: Elements of the Department Review (to be completed by the advisor)

1. Address areas of strength (examples from areas such as courses, milestones completed, research, teaching, or professional activity).
2. Address areas for growth and development (e.g., development of research, writing, public speaking skills, and/or teaching skills, improved course performance, or project outcomes) for the next year.
3. Address milestones to complete (see suggestions above)/plans for the next year (e.g., courses and credit hours to complete, exams to complete, expected progress on thesis/dissertation/project, publications, or other professional activity).
4. Provide estimated Graduate Date based on Current degree progress.

Signature of Advisor, Graduate Program Coordinator and/or Review Committee Chairperson and dates:

(Please place a copy in student file; and provide a copy to the student)

Meeting with Student

Note the date of meeting, who conducted the meeting, and any additional notes from the meeting.

Attachments:

Current Student CV: The current CV should contain this or additional information of academic and professional activity and accomplishments previous to the last academic year.

Student comments after the meeting:

Advisor comments after the meeting:

X. PROGRAM POLICIES: INTEGRITY IN RESEARCH AND CREATIVE ACTIVITIES

Integrity in research and creative activities is founded on sound disciplinary practices and a commitment to basic values, including honesty, fairness and respect. Students learn to value professional integrity and standards of ethical behavior through interactions with faculty who are modeling this behavior. The Graduate College requires that all graduate students receive Responsible Conduct of Research training (RCR) before completion of their first semester at Oklahoma State University. Following is an excerpt taken from the OSU Responsible Conduct of Research website (<https://research.okstate.edu/research-compliance/index.html>):

“Oklahoma State University has an obligation to ensure that all students, faculty and staff conducting research do so by applying the highest ethical standards. Education and training in the ethical and responsible conduct of research is an essential element of training for individuals who are pursuing degrees or engaging in research in any field. Over the past few years funders have become more likely to require that everyone conducting research receive training in the responsible conduct of research in core areas that are seen as significant in conducting research (including proper citation of other work, plagiarism, research misconduct, intellectual property and copyright, falsification and unwarranted editing of data, conflict of interest, authorship on manuscripts, and mentor-mentee relationships).

OSU implemented a policy in 2009 requiring degree-seeking graduate students, postdoctoral fellows/associates and undergraduate students engaged in research to receive appropriate, institutionally-endorsed education and training in responsible conduct of research. Graduate students are required to complete RCR training during their first semester at OSU, but the Graduate College recommends refresher training every three years or when a student begins a new degree program.

The training materials encourage investigators and students to think critically and to engage in discussions about what it means to be an ethical researcher. Conducting research ethically requires an understanding and appreciation of the ethical imperatives behind the rules.

If you have questions, email us at rcr.ethics@okstate.edu”

The Horticulture Graduate Program requires that all students complete RCR training and that they provide proof of completion to the graduate secretary upon completion. Information about this training can be found at: <https://research.okstate.edu/compliance/rcr/training.html>

In addition to RCR training, certain students may be involved with research projects which require additional University oversight. Such projects require submission of project information/certification prior to start of the research project. If projects include the use of animals in research, consult <https://research.okstate.edu/research-compliance/iacuc/index.html> for additional information; if projects include the use of human subjects/use of a questionnaire as a research tool consult <https://research.okstate.edu/research-compliance/irb/index.html> for additional information; if projects include the use of radioactive substances/radiation producing devices consult <https://research.okstate.edu/research-compliance/rso/index.html> for further information; if projects include the use of pathogenic microorganisms or involve molecular genetic modification consult Biosafety <https://research.okstate.edu/research->

[compliance/ibc/index.html](https://research.okstate.edu/research-compliance/ibc/index.html) for further information; if projects include the use of lasers in research consult <https://research.okstate.edu/research-compliance/lso/index.html> for further information.

Dismissal from the Horticulture Graduate Program due to Integrity Violation: Graduate students may be dismissed from the Horticulture Graduate Program for academic integrity violations, student misconduct or behavior that is deemed an egregious violation of professional behavior. In such instances, the student will be informed by the program of the intent to dismiss and their right for due process and to appeal. If a student appeals the decision to dismiss, s/he must be allowed to maintain enrollment and continue working toward the graduate degree in the same manner as any other graduate student in the program during the appeals process. Continued enrollment is not required to appeal. Once the decision of the appropriate appeals panel is made, it will be final.

XI. STUDENT CONDUCT AND CONFLICT RESOLUTION

All graduate students in the Horticulture Graduate Program are expected to adhere to the student code of conduct found at <https://ssc.okstate.edu/>. Previous sections of this handbook have indicated various grounds for dismissal from our Program. It is our goal, however, that no student be dismissed from our Program for conduct violations without substantial conflict resolution. The preferred place for conflict resolution to occur is within the Program or Horticulture and Landscape Architecture Department. The Graduate Program Coordinator plays a central role in conflict resolution between a graduate student and his/her faculty advisor or advisory committee.

In most cases clear, frequent communication avoids conflicts. Students should maintain open communications with their Major Professor, interacting with them on at least approximately weekly intervals. Interactions with the Graduate Committee are less frequent, conducted on an as-needed basis.

If a conflict arises between the student and his/her Major Professor and/or Graduate Committee which cannot be resolved, the student should contact the Graduate Coordinator. If the conflict includes the Graduate Coordinator the student should contact the Head of the Department of Horticulture and Landscape Architecture. This initial contact should occur within two weeks of the conflict and should be documented in writing. The Graduate Coordinator and/or the Department Head will convene a meeting with the student within one week of notification to document any background information related to the conflict. If appropriate a meeting between all parties will be held to seek informal resolution within two weeks of the initial meeting. If informal resolution cannot be accomplished the student may appeal to the Dean of the Graduate College. Further information for the graduate student appeals policy can be found at:

<https://chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://gradcollege.okstate.edu/resources/appeals-policy.pdf>

XII. APPEALS PROCESS

Overview: The purpose of this procedure is to provide current graduate students in the Horticulture Graduate Program the opportunity to resolve complaints about dismissal from the program, placement on probation, recommended denial of readmission to the program, and other administrative or academic decisions that terminate or impede a student's progress toward their academic or professional degree goals. Note that grade appeals, and academic integrity appeals are governed by university policies and procedures that apply to all students, undergraduate and graduate. For further information pertaining to grade appeals consult <https://academicaffairs.okstate.edu/faculty-development/grade-appeal.html>. University policy pertaining to academic integrity can be found at <https://academicaffairs.okstate.edu/academic-integrity/index.html>.

Process: The student is required to provide written notification of appeal to the Horticulture Graduate Program Coordinator within 14 calendar days of the precipitating event that is the subject of the appeal. If the Graduate Program Coordinator is an involved party, the student should seek advice from the unit head or associate dean of graduate studies in their disciplinary college. Notification should include, information on the circumstances of the appeal, specific issues involved, and the remediation action sought. The document should be no more than two pages. Within 7 calendar days of receipt of the notification, any involved parties within the program (e.g., faculty or staff) will be notified and provided a copy of the appeal. The graduate program's appeals committee (the standing Horticulture Graduate Committee) will be convened to hear the appeal within 30 days. At the hearing, the student will have the opportunity to present their case and the same time would be allowed for counterarguments, if warranted. Questions may be asked of either party by members of the appeals committee. At the end of this hearing, the program's appeals committee will deliberate, and their decision will be considered final at the program level. The student will be notified in writing of the decision and their right to appeal to the unit head, followed by the Dean of the Graduate College, if they so choose.

Enrollment: Throughout the appeal process the student is allowed to maintain enrollment and continue working toward the graduate degree in the same manner as any other matriculated graduate student in the program. Continued enrollment is not required to appeal within the allowed timeframes.

Appeals Committee: The make-up of the appeals committee shall be the standing Horticulture Graduate Committee. Should any member of the Graduate Committee be a party in the conflict they will be replaced by another member of the Graduate Faculty within the Department of Horticulture and Landscape Architecture at the discretion of the Horticulture Graduate Coordinator.

Deadlines: Unless stated otherwise, all deadlines are by 5:00 pm central time on the day of the deadline or the next regular business day (Monday–Friday) when the deadline falls on a weekend (Saturday–Sunday) or OSU official holiday, such as Labor Day. Time frames and deadlines that extend beyond the end of the academic terms (fall and spring semesters and summer sessions) are handled at the discretion of the Graduate Program Coordinator.

XIII. ASSISTANTSHIP AND FELLOWSHIP POLICIES

Assistantships are offered on a competitive basis and are usually defined within an offer letter at time of admittance into the Horticulture Graduate Program. The Horticulture Graduate Committee makes a recommendation regarding applicant's eligibility for departmental assistantships which is forwarded to the Department Head for consideration. After acceptance of an assistantship the student must present applicable forms of identification, work clearance and a social security card to departmental personnel to be placed onto payroll prior to the start of the semester for which the student has applied. Each student on at least 0.5 FTE assistantship must complete a tuition waiver contract prior to the start of the semester. The tuition waiver contract can be downloaded from the Graduate College website (<https://gradcollege.okstate.edu/resources/current-student-resources.html>) and is completed online. All students must also print their contract and provide it to the Graduate Secretary in 358 Ag. Hall for departmental records. The Graduate College provides tuition waivers and health insurance for all qualifying graduate students with 0.5 FTE assistantships.

The Horticulture Graduate Program also offers 0.25 FTE assistantships, which may be matched with a Fellowship to bring the monetary value of the assistantship equivalent to a 0.5 FTE. Students with a 0.25 FTE assistantship/0.25 FTE Fellowship may enroll in 6 h of coursework during the Fall and Spring semesters, and 2 h during the Summer semester, and be considered full time. The Fellowship match also includes "tuition offset" funding since the Graduate College only provides tuition waivers for students with 0.5 FTE assistantships. The "tuition offset" funding provides the monetary equivalent of a tuition waiver for 6 h of graduate, in residence coursework in the fall and spring semesters and for 2 h of graduate, in residence coursework in the summer semester. Fellowships are deposited into the student's bursar account three times per year, corresponding to the month in which each semester begins. Students with a 0.25 FTE assistantship/0.25 FTE Fellowship must also complete a tuition waiver contract to be eligible for health insurance benefits provided by the Graduate College. Students are asked to indicate on the bottom of the contract the name of their Fellowship they are occupying.

Most assistantships are funded from grants and contracts which are unique to the student's Major Professor. It is very uncommon for a student to change Major Professors and continue on the same assistantship. The Horticulture Graduate Program recognizes assistantships as non-transferable.

All students on Graduate Research Assistantship (GRA) provide assistance to the research program of their major professor; 0.5 FTE Graduate Research Assistants/Associates should spend, on average, 20 hours per week assisting with the research program (10 hours per week for 0.25 assistantships). Communicate with your Major Professor to ascertain what your responsibilities are.

All students on Graduate Teaching Assistantship (GTA) provide assistance in the teaching mission of the Department of Horticulture and Landscape Architecture. Students may rotate onto a GTA on a semester-by-semester basis and their duties may or may not be affiliated with their Major Professor's teaching program. The time commitment for a GTA is in line with that of a GRA.

The Horticulture Graduate Program strongly discourages holders of GRA/GTA's from seeking outside work for pay. Your commitment to learning and practicing research skills, completing coursework and fulfilling all of the requirements of the Program scarcely allows for outside work. If any student on GRA/GTA within the Horticulture Graduate Program chooses to become involved in outside work for pay they are required to consult with their Major Professor. If the Major Professor determines that such activity will not allow sufficient time for project-related duties the student may be asked to relinquish their assistantship.

Assistantships and Fellowships do not accrue vacation/holiday leave time. If a student wishes to take some personal time they are required to inform and consult with their Major Professor. The student should be prepared to demonstrate that the time will not adversely affect their project and will be expected to make up any time or research activities missed during their absence.

Assistantships are awarded for a two (2) year duration for MS and a three (3) year duration for Ph.D. students. All assistantships are reviewed on a yearly basis and are subject to continuance on the basis of satisfactory performance as documented in the Graduate Student Annual Academic Progress Review (see section IX of this handbook). If unsatisfactory progress is noted the student, Major Professor and Graduate Coordinator outline a corrective plan which must be adhered to in order to continue on assistantship.

All graduate students are provided office space and a computer for their use. In addition, students are provided a mailbox upon their arrival. Keys for access to Departmental facilities are provided by the Graduate Secretary and must be returned upon graduation. Graduate students are allowed to use the Departmental photocopier, printers and fax machine. A color printer for preparation of posters at professional meetings is also available and should be accessed through the student's Major Professor. Laboratory, greenhouse and field facilities are available to support research project needs and are accessed via the Major Professor.

XIV. CRITICAL SKILLS ACQUISITION:

Your undergraduate degree centered around completion of courses required for the degree – once these courses were completed with satisfactory grades your degree was conferred. Graduate studies still include coursework but additional independent, original work on your part is required for the graduate degree. The Horticulture Graduate Program expects students entering the program to have a basic understanding of the Horticulture discipline. If prior coursework in Horticulture and/or Plant Science is lacking from an applicant's college transcripts, the Horticulture Graduate Committee may recommend completion of basic courses as a condition of acceptance into the program. Students completing a degree in the Horticulture Graduate Program complete courses in Horticulture and related disciplines, including at least one graduate level Statistics course. In addition to coursework students receive training in the conduct of research and must demonstrate proficiency in their understanding of the existing knowledge base within their specialization area, their ability to develop a testable hypothesis within their research area, their competency in describing the methods used to test the hypothesis, their description of the results of the tests and their interpretation of results in context with the body of knowledge documented in their field of study.

Opportunities to learn and demonstrate research skills are afforded to students in the Horticulture Graduate program through one-on-one interaction with the student's Major Professor and Committee Members in conduct of their research project, and through oral and written communications. All students are required to complete research ethics training by completing the Responsible Conduct of Research training prior to the start of their third full semester (<https://research.okstate.edu/compliance/rcr/training.html>). All students present proposal and results seminars, as well as prepare a written research proposal and thesis. These activities provide students an opportunity to hone their skills in the practice of research and to receive critical feedback related to their projects. Students are encouraged to participate in the annual Research Week activities and present their research to a broader, university-wide audience (<https://research.okstate.edu/experts-and-media/>). The Graduate College offers students an opportunity to enhance their professional development through various programs which can be found at (<https://gradcollege.okstate.edu/professional-development/index.html>). Students are also encouraged to present their research findings at regional and national professional meetings. The Graduate and Professional Student Government Association (GPSGA) offers travel reimbursement grants to help offset travel costs for meeting presentations. Information for how to apply for a grant can be found at the GPSGA website (<http://gpsga.okstate.edu/>).

Writing skills are particularly important for completion of your degree requirements and for successful integration into the Horticulture discipline. Assistance can be obtained from the OSU Writing Center (<http://osuwritingcenter.okstate.edu/>). This Center offers workshops open to all graduate students and offers one-on-one assistance by appointment. International students are encouraged to complete ENGL 4893, Research Writing for International Students. This course is approved for graduate credit and provides students a basic understanding of writing research reports. Your Major Professor is also a primary resource for writing your proposal and thesis. He or she will provide guidance as you progress through drafts of your documents prior to submission to your Graduate Committee. Your Major Professor will also assist you in

preparation of oral or poster presentations, and in preparation and submission of manuscripts for submission to scientific journals.