



**PLANT  
BREEDING**

**PLANT BREEDING GRADUATE PROGRAM**

**Graduate Student and Faculty  
Handbook**

Edited January 9, 2023

**UF | IFAS**  
UNIVERSITY *of* FLORIDA

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## I. MISSION AND VALUES

Welcome to the Plant Breeding Graduate Program (PBGP) at the University of Florida (UF). The goal of this program is to be a global leader in plant breeding education by training highly skilled students in germplasm and cultivar development ensuring more and better food, feed, fuel, fiber, and ornamentals. Our plant breeding faculty members are deeply committed to educating the next generation of innovative plant breeders to be well-rounded and career-ready for the industry, academia, non-profit, or other sectors.

The goals of this handbook are to (1) assist PBGP graduate students in successfully navigating the necessary requirements for their degree program and meeting all deadlines as established by the University of Florida and the Graduate School, and (2) provide official rules, policies, and regulations to be followed by both PBGP graduate students and faculty. The handbook contains clickable hyperlinks that lead you to more information. We have made every effort to ensure the accuracy of the information presented here. Please note that the [UF Graduate Catalog](#) is the University of Florida's official publication for graduate policies, dates & deadlines, procedures, and other sanctioned topics and will take precedence if there are any discrepancies between it and the PBGP Graduate Handbook.

## II. PBGP GENERAL INFORMATION

The Institute of Food and Agricultural Sciences (IFAS) at UF is the land-grant university with the largest plant breeding faculty in the nation, and one of the largest in cultivars developed and cultivars licensed. PBGP is an interdepartmental graduate degree program that equips students with traditional and contemporary breeding methodologies, including field-based breeding evaluation, quantitative genetics, modern molecular techniques, and phenotyping technologies.

Our graduate program currently has 31 faculty members who are deeply committed to educating the next generation of innovative plant breeders. These faculty breed 50 diverse species and are housed in four different UF/IFAS units ([Agronomy](#), [Environmental Horticulture](#), [Horticultural Sciences](#), and the [School of Forest, Fisheries & Geomatics Sciences](#)) strategically located throughout Florida. Some members are stationed in Gainesville (main campus) while others carry their breeding programs in 6 off-campus Research and Educational Centers (aka RECs): [North Florida REC](#) (located in Marianna), [Mid-Florida REC](#) (Apopka), [Gulf Coast REC](#) (Wimauma), [Citrus REC](#) (Lake Alfred), [Tropical REC](#) (Homestead), and [Everglades REC](#) (Belle Glade). Table 1. shows each of our faculty members and their corresponding unit (department), location in the state, specialty, and crop.

The PBGP does not require students to be physically present on main campus to attend classes. Given UF's comprehensive online offerings and availability, all PBGP core courses and most electives are now offered online. Unless deemed necessary by the supervisory committee or as a course requirement, off-campus plant breeding students can start their programs and research at their RECs.

**Table 1. Plant Breeding Graduate Program Faculty List**

<b>Faculty Name (Last, First)</b>	<b>Department</b>	<b>Location</b>	<b>Specialty</b>	<b>Crop</b>
Altpeter, Freddy	Agronomy	Gainesville	Mol. Genetics & Biotechnology	Bioenergy, Turf
Babar, Md Ali	Agronomy	Gainesville	Breeding & Molecular Genetics	Grains
Blount, Ann	Agronomy	NFREC	Turf Breeding & Genetics	Forage
Chambers, Alan	Horticultural Sciences	TREC	Genetics & Breeding	Tropical Fruits
Chaparro, José	Horticultural Sciences	Gainesville	Breeding & Genetics	Stone fruits
Clark, David	Environmental Horticulture	Gainesville	Breeding & Biotechnology	Ornamentals
Deng, Zhanao	Environmental Horticulture	GCREC	Breeding & Genetics	Ornamentals
Dutt, Manjul	Horticultural Sciences	CREC	Breeding & Genetics	Citrus
Gmitter, Fredrick	Horticultural Sciences	CREC	Breeding & Genetics	Citrus
Grosser, Jude	Horticultural Sciences	CREC	Breeding & Genetics	Citrus
Huo, 'Alfred' Heqiang	Environmental Horticulture	MREC	Breeding & Genetics	Ornamentals
Hutton, Sam	Horticultural Sciences	GCREC	Breeding & Genetics	Tomato
Jarquín, J. Diego H.	Agronomy	Gainesville	Integration & Application of AI & Omics in Plant Breeding	Various
Kenworthy, Kevin	Agronomy	Gainesville	Breeding & Genetics	Turfgrass
Kirst, Matias	Forest, Fish. & Geom.	Gainesville	Quantitative Genetics & Biometrics	Forestry
Lee, Seonghee	Horticultural Sciences	GCREC	Molecular Genetics & Genomics	Strawberry
Lee, Tong Geon	Horticultural Sciences	GCREC	Bioinformatics & Genomics	Tomato
Meru, Geoffrey	Horticultural Sciences	TREC	Genetics & Genomics	Vegetables
Messina, Charlie 'Carlos'	Horticultural Sciences	Gainesville	Prediction Based Breeding	Various
Munoz, Patricio	Horticultural Sciences	Gainesville	Breeding & Genomics	Blueberry
Peter, Gary	Forest, Fish. & Geom.	Gainesville	Genomics & Cell Biology	Forestry
Rathinasabapathi, Bala	Horticultural Sciences	Gainesville	Breeding & Genomics	Peppers
Resende, Márcio	Horticultural Sciences	Gainesville	Breeding & Genomics	Sweet Corn
Rios, Esteban	Agronomy	Gainesville	Breeding & Genetics	Forage
Sandhu, Hardev	Agronomy	EREC	Crop Physiology & Management	Sugarcane
Sandoya M., Germán	Horticultural Sciences	EREC	Breeding & Genetics	Lettuce
Tillman, Barry	Agronomy	NFREC	Breeding & Genetics	Peanut
Wang, Jianping	Agronomy	Gainesville	Genetics, Genomics, Bioinformatics; Symbiosis	Peanut
Wang, 'Kevin' Xu	Agric. & Biol. Eng. (ABE)	GCREC	Plant Phenomics	Various
Whitaker, Vance	Horticultural Sciences	GCREC	Breeding & Genetics	Strawberry
Wu, Xingbo	Environmental Horticulture	TREC	Breeding, Genetics, Genomics, & Bioinformatics	Ornamentals

### III. LEARNING OUTCOMES AND COMPETENCIES

The learning outcomes and expected competencies for PBGP graduate students upon completion of their Ph.D. degree include the following:

- Explain and apply fundamental theories and principles of plant breeding, genetics and genomics, plant biochemistry, plant transformation technologies and computational genetics.
- Apply genetic inheritance theory to crops of interest. Develop a breeding strategy for a targeted crop trait based on the crop life cycle, mode of reproduction and trait inheritance.
- Use critical thinking to review scientific literature.
- Evaluate, plan, analyze, and design experiments related to plant breeding and cultivar development.
- Communicate effectively and clearly in written and oral form plant breeding ideas, technical data and design information to students, scientists, and general public.
- Prepare and complete plant breeding research of sufficient quality to be published in peer reviewed journals, at professional conferences, and/or at industry field days.
- Interact with peers, faculty, and staff with honesty, respect, ethical behavior, cultural sensitivity, fellowship, and cooperation.

### IV. ACADEMIC REQUIREMENTS

The PBGP currently offers a Ph.D. degree in Plant Breeding. Our Ph.D. curriculum is designed to provide the student with a strong background in the scientific method, experimental design, and analysis of data during the first semester followed by a strong foundation in plant breeding during the second semester. This first year of required coursework (a.k.a. core courses) ensures that students will be prepared to take specialized courses and can formulate their dissertation studies. After taking core courses, students with the help of the advisor and committee will create a plan of study and branch out to specialty elective courses that apply to their specific research interest.

Our doctoral training is accomplished through thoughtfully designed academic and research programs crafted through a coordinated effort of the student's chair and supervisory committee in consultation with the student and industry advisors.

All graduate degrees at the University of Florida are conferred by the [Graduate School](#). PBGP serves as a liaison between the student and the Graduate School. Students are required to comply with requirements, deadlines and procedures stated in the [Graduate Catalog](#). The Graduate School sends email reminders of critical dates via the [Graduate Student Listserv](#). All graduate students are responsible for complying with these deadlines as well as those published in the [Academic Calendar](#). The Graduate School also supports UF [graduate students' professional development](#) by creating programming, and collaborating with various units and colleges across campus on a number of professional development opportunities available throughout the year.

## A. PH.D. REQUIREMENTS IN A NUTSHELL

Below is a summary of what is needed to graduate with a Ph.D. in Plant Breeding. We will delve into more details about each one of these requirements in the following sections of this handbook.

**To successfully obtain a doctoral degree in Plant Breeding the student is required to:**

- Obtain a minimum of 90 credit hours beyond a bachelor’s degree, including:
  - A minimum of 40 credits of coursework toward their major:
    - 20 credits must be taken from the list of core courses provided in Table 2.
    - 20 credits of elective courses, which can be chosen from the list provided in Table 3 or as determined by the supervisory committee.
  - The remaining 50 credits can be from additional electives or research (PLS 7979 Advanced Research – taken before candidacy or PLS 7980 Doctoral Research – taken after candidacy)
- Form a supervisory committee by the third semester since admission to the program.
- Secure approval of the Research Prospectus and Program of Study by the supervisory committee by the end of third semester since admission into the program.
- Pass the Qualifying Exams by the end of the sixth semester since admission.
- Pass Dissertation Defense before final submission to the Graduate School Editorial Office.
- Submit at least one scientific manuscript as a first author before graduating from the program.
- Prepare and submit dissertation following UF templates and guidelines, and secure approval from the Graduate School Editorial Office.

### OVERVIEW FOR STUDENTS ADMITTED IN THE FALL:

F: Fall    SP: Spring    SU: Summer

ACTIVITIES BY YEAR		YEAR 1			YEAR 2			YEAR 3			YEAR 4		
		F	SP	SU	F	SP	SU	F	SP	SU	F	SP	SU
<b>CORE COURSES</b>	AGR 5266C (3 cred.)	X											
	AGR 5321C (3 cred.)		X										
	AGR 6325L* (1 cred.)		(X)			(X)							
	STA 6093 (3 cred.)	X											
	PCB 6555** (3 cred.)	(X)			(X)								
	HOS 6932 JC*** (1 cred.)	X	X		X	X							
	HOS 6932 SBTM**** (3 cred.)		X										
<b>ELECTIVE COURSES</b>					X	X	X	X	X	X			
<b>RESEARCH</b> (on-going)	PLS 7979 - variable	X	X	X	X	X	X						
	PLS 7980 - variable							X	X	X	X	X	X
<b>SUPERVISORY COMMITTEE</b>				X									
<b>RESEARCH PROSPECTUS</b>				X									
<b>PROGRAM OF STUDY</b>				X									
<b>CANDIDACY EXAM</b>							X						
<b>JOURNAL ARTICLE</b>													X
<b>FINAL EXAM</b>													X

## OVERVIEW FOR STUDENTS ADMITTED IN THE SPRING:

F: Fall    SP: Spring    SU: Summer

ACTIVITIES BY YEAR		YEAR 1			YEAR 2			YEAR 3			YEAR 4		
		SP	SU	F	SP	SU	F	SP	SU	F	SP	SU	F
CORE COURSES	AGR 5266C - 3 cred.			X									
	AGR 5321C - 3 cred.	X											
	AGR 6325L* - 1 cred.	(X)			(X)								
	STA 6093 - 3 cred.		X										
	PCB 6555 - 3 cred.			(X)			(X)						
	HOS 6932 JC** - 1 cred.	X		X	X		X						
	HOS 6932 SBTM*** - 3 cred.	X											
<b>ELECTIVE COURSES</b>					X	X	X	X	X	X			
<b>RESEARCH</b> (on-going)	ALS 7979 - variable	X	X	X	X	X	X						
	ALS 7980 - variable							X	X	X	X	X	X
<b>SUPERVISORY COMMITTEE</b>				X									
<b>RESEARCH PROPOSAL PLAN</b>				X									
<b>PROGRAM OF STUDY</b>				X									
<b>CANDIDACY EXAM</b>							X						
<b>JOURNAL ARTICLE</b>													X
<b>FINAL EXAM</b>													X

\* AGR 6325L: can be taken any spring semester of odd years in coordination with the supervisory committee

\*\* PCB 6555: can be taken any fall semester of even years in coordination with the supervisory committee

\*\* HOS 6932 JC: Journal Colloquium

\*\*\* HOS 6932 SBTM: Survey of Breeding Tools & Methods

## B. PH.D. REQUIREMENTS IN DETAIL

### 1. COURSEWORK

The plant breeding Ph.D. degree requires a minimum of 90 credit hours beyond a bachelor's degree and includes required courses, elective courses, and dissertation research. To graduate in the program, students are required to have a minimum of 40 credits of coursework toward their major. All students are required to take 20 credits from core courses as listed in **Table 2** and choose a minimum of 20 additional credits either from the list of elective courses in **Table 3** or as determined by the supervisory committee. The number of dissertation research credits (**Table 4**) will vary according to the student's field of study and progression toward research and degree.

All required courses (a.k.a. core courses) for the major in Plant Breeding should be completed by the third semester since admission into the program (during the student's first year). These core courses include STA 6093 Introduction to Applied Statistics for Agricultural and Life Sciences (3 credits), AGR 5266C Field Plot Techniques (3 credits), AGR 5321C Genetic Improvement of Plants (3 credits), HOS 6932 Survey of Breeding Tools & Methods (3 credits), AGR 6325L Plant Breeding Techniques (1 credit), and PCB 6555 Introduction to Quantitative Genetics (3 credits). Due to the recurrence rate of AGR6325L (offered only

spring semesters of odd years) and PCB 6555 (offered only fall semesters of even years), these courses may be taken anytime during the students' graduate studies. Students are highly encouraged to take them as early as possible after being admitted into the program.

In addition, students are also required to take a minimum of four credits of HOS 6932 Journal Colloquium, which might be taken in any fall or spring semesters during the students' graduate studies. Students are required to maintain at least a B (3.00 truncated) in all required courses toward the major.

**Table 2. List of CORE courses**

**F:** Fall    **SP:** Spring    **SU:** Summer

CORE COURSES	INSTRUCTOR(S)	TERM	FREQUENCY	OFFERED BY	CREDITS
AGR 5266C Field Plot Techniques	E. Rios	F	Annual	Agronomy	3
AGR 5321C Genetic Improvement of Plants	A. Babar F. Altpeter	SP	Annual	Agronomy	3
AGR 6325L Plant Breeding Techniques	K. Kenworthy	SP	Odd years	Agronomy	1
PCB 6555 Intro to Quantitative Genetics	M. Resende M. Kirst	F	Even years	SFFG	3
STA 6093 Intro to Applied Statistics for Agricultural & Life Sciences	D. Valle B. Baiser	F, SP	Annual	Statistics	3
HOS 6932 Survey of Breeding Tools & Methods *	P. Munoz	SP	Annual	HOS	3
HOS 6932 Journal Colloquium **,**	Team-taught	F, SP	Annual	HOS	4 total (1 cred. x 4 terms)
<b>Total credits of core courses in the major</b>					<b>20</b>

\* HOS 6932 Journal Colloquium and HOS 6932 Survey of Breeding Tools & Methods are currently offered as special topics courses in the Horticultural Sciences Department but are expected to be approved and have their own prefixes and course numbers assigned soon.

\*\* Students can take HOS 6932 Journal Colloquium (1 credit) any fall and spring semesters to be counted toward the required total of 4 credits of Journal Colloquia required during their graduate studies.

Students entering the doctoral program with a completed master's degree may transfer up to 30 hours of graduate credits toward their elective courses requirement from a regionally accredited institution or international equivalent, subject to existing UF Graduate School policies. Courses beyond the Master's degree taken at another university may be transferred to the doctoral program as long as the courses are letter-graded with a grade of B or better, relate directly to the degree being sought, and are earned within the previous seven years.

If similar level course(s) were taken prior to the doctoral degree, a petition must be submitted by the student's supervisory committee chair to exclude and/or replace specific courses. The petition needs to be approved by PBGP director and submitted to CALS and the Graduate School, when deemed necessary.



**Table 3. List of ELECTIVE courses**

F: Fall    SP: Spring    SU: Summer

ELECTIVE COURSES	INSTRUCTOR	TERM	FREQUENCY	OFF. BY	CRED.
AGR 5307 Molecular Genetics for Crop Improvement	F. Altpeter	SP	Even years	Agronomy	3
AGR 6322 Advanced Plant Breeding	E. Rios	F	Even years	Agronomy	3
AGR 6305 Plant Chromosomes and Genomes	J. Wang, E. Rios	SP	Annual	Agronomy	3
AGR 5444 Ecophysiology of Crop Production	J. Estrada	SP	Annual	Agronomy	2
BCH 5045 Graduate Survey of Biochemistry	T. Colquhoun	SP	Annual	ENH	4
NEM 5004C Graduate Survey of Nematology	P. Digennaro	SP	Annual	Ento & Nem	3
ENY 5006 Graduate Survey of Entomology	R. Baldwin, C. Miller, A. Auletta	F, SP	Annual	Ento & Nem	2
ENY 5006L Graduate Survey of Entomology Laboratory	R. Baldwin, C. Miller	F, SP, SU	Annual	Ento & Nem	1
GMS 6231 Genomics and Bioinformatics	M. Kirst, S. Chen, K. Balmant	SP	Annual	Medicine-MGM	3
HOS 5242 Genetic and Breeding of Vegetable Crops	B. Rathinasabapathi	SP	Odd years	HOS	3
HOS 6201 Breeding Perennial Cultivars	J. Chaparro	F	Odd years	HOS	3
HOS 6236 Molecular Marker-Assisted Plant Breeding	P. Munoz, M. Resende, K. Folta	F	Odd years	HOS	3
HOS 6932 Horticultural Physiology	G. Nunez	F	Annual	HOS	3
PCB 5065 Advanced Genetics	Team taught, L. Hannah (coord.)	F	Annual	HOS	4
PCB 5530 Plant Molecular Biology and Genomics	Team taught, G. Peter (coord.)	F	Annual	HOS	3
PCB 6685 Population Genetics	C. Baer	SP	Annual	Biology	4
PLP 5005C General Plant Pathology	B. Richter	F	Annual	Plant Path	4
PLP 6291 Plant Disease Diagnosis	C. Harmon	SP	Annual	Plant Path	3

As noted, since all PBGP core courses and most electives are now offered online students are not required to be physically present in Gainesville to attend classes. Gainesville presence is course dependent (e.g.

when field trips are offered), or when no online option is available, or as determined by advisor and supervisory committee.

**Table 4. List of RESEARCH courses**

DISSERTATION RESEARCH	INSTRUCTOR	TERM	FREQUENCY	CREDITS
PLS 7979 Advanced Research <i>before Candidacy</i>	Chair	Any	Annual	Variable (1-9)
PLS 7980 Doctoral Research <i>after Candidacy</i>	Chair	Any	Annual	Variable (1-9)

## 2. GRADUATE SUPERVISORY COMMITTEE

Each graduate student must have a supervisory committee, whose responsibility is to aid the student in planning and facilitating the graduate program goals. The graduate advisor is the main contact for information regarding graduate education and will serve as the chair of the student’s supervisory committee. The chair/advisor will work together with the student to select the rest of the supervisor committee which should be composed of at least four members:

1. **Chair** (must have graduate faculty status in PBGP)
2. **Member** (must have graduate faculty status in PBGP)
3. **Member** (must have UF graduate faculty status)
4. **External member** (must have UF graduate faculty status in any department other than PBGP)

The Graduate Catalog states that students must have a minimum of four members in their committees, including the chair, two additional members, and one external member. At least two members, including the chair, must be from the PBGP. One member serves as an external member and should be from a different educational discipline, with no ties to the home academic unit. One regular member may be from the PBGP or another unit. All members of the committee must have graduate faculty status at UF unless special appointment approval is granted.

The deadline to have a supervisory committee assembled is by the end of the third semester since admission into the program. Please note that if a committee is not established by the third semester in the program, a hold will be placed on the student’s records.

Advising the student’s research is primarily the responsibility of the chair, but research must ultimately be approved by all members of the supervisory committee. Upon arrival at the University, students should meet with their major advisor to (i) identify the members of the supervisory committee, (ii) determine the proposed research plan, and (iii) establish the program of study. Additionally, the graduate advisor will work with the student to determine the frequency of meetings with the supervisory committee. The advisor is also responsible for annually evaluating the student’s academic and research progress as well

as their performance as graduate assistants by completing the PBGP Graduate Student Annual Evaluation and the IDP (Individual Development Plan), as described on page 14.

The major roles of the supervisory committee are to (i) carefully review and evaluate past education; (ii) identify academic deficiencies; (iii) advise and select course work, (iv) advise on the development of the dissertation proposal; (v) review, evaluate, and approve dissertation; (vi) conduct the qualifying and final examinations. The committee also has the responsibility of ensuring the dissertation is a piece of original research contributing to new knowledge in the field.

**The external member** must have graduate faculty status with the UF Graduate School. Faculty holding joint, affiliate, courtesy, or adjunct graduate faculty appointments cannot serve as external members on student committees. Special appointments to supervisory committees may **not** serve as external committee members.

Individuals without graduate faculty status may be made official members of a student's supervisory committee through the **Special Appointment** process. Special members count over and above the minimum required four members, not toward it (they are "guest experts"). Special member appointments are usually individuals from outside of UF with specific expertise which will contribute to a graduate student's program of study; tenure-track faculty who have not yet qualified for graduate faculty status; and non-tenure-track faculty or staff at UF who do not qualify for graduate faculty status. **Special members may not serve as a supervisory committee chair, co-chair, external member, or minor representative.** To have a special member added to a supervisory committee, please obtain the Special Appointment Form with the Academic Coordinator.

Changes in the supervisory committee can be made up until the midpoint of the semester in which the student is graduating. To make changes to a committee, students must contact the Director or Academic Coordinator. Refer to the [UF Graduate School – Graduate Catalog](#) for more information on Ph.D. supervisory committee requirements.

### 3. RESEARCH PROSPECTUS AND PROGRAM OF STUDY

Students need to write a Research Prospectus by the end of the third semester since admission into the program. This document is basically a 1-page proposal that is expected to help the student focus on her/his particular research project (see Appendix I). The goal of this document is to serve as the basis for writing a full research proposal during the second year of the program. The proposal needs to be submitted to the supervisory committee for review and approval.

In addition to the research proposal, students should also submit a Program of Study form (see Appendix II) detailing all the proposed coursework (core and elective courses) each semester until graduation. Similar to the research Prospectus, the program of study form also needs to be submitted to the supervisory committee for review and approval by the end of the third semester since admission into the program.

#### 4. QUALIFYING EXAMINATION

Students must take a qualifying examination administered by their supervisory committee before they can be advanced to doctoral candidacy. The qualifying exam is composed of both written and oral exams which are required for all candidates for a Ph.D. degree.

The qualifying exams must be completed by the end of the sixth semester after admission into the program. Students are advised to complete this deadline well in advance. Any exams scheduled after this deadline is considered late and a hold will be placed on the student's records.

During the qualifying examination, the supervisory committee will assess the students':

- Depth and breadth of knowledge in their chosen field of study,
- Capacity to formulate scientific hypotheses and design experiments to test them in their field of study,
- Critical thinking regarding their research proposal, and
- Capacity for clearly and effectively communicating both orally (presentation) and in written form (proposal).

Successful completion of the qualifying exams will be determined by the student's supervisory committee, as each student and exam will be unique. The student is considered to have satisfactorily passed the qualifying exam when the decision of the supervisory committee is unanimously affirmed. If the examination is unsatisfactory, the supervisory committee may permit a second examination or deny the student from continuing in the program.

In preparation for the exam, the student must write a full, detailed NSF- or USDA-style format proposal describing a researchable topic. Students should submit this full research proposal to the supervisory committee for approval by the end of their sixth semester since admission to the program. Typically, the proposal includes a rationale, objective(s) and supportive aim(s), relevant background information, justification, experimental procedures, and expected outcomes.

##### *a) Written Exams*

The UF-mandated written section of the qualifying exam will be coordinated by the chair of the supervisory committee. Each member of the committee will give the student either an open or closed-book exam and the time allotted for completion. These exams should be given a month immediately before the oral exam. Committee members should provide students with feedback based on the respective exam results before the oral exam. The supervisory committee may postpone the oral exam for a retake of the written exam in case of poor performance.

##### *b) Public Seminar and Oral Examination*

A seminar and oral examination will immediately follow the written exams. Students should present a public seminar that details their full research proposal plan (research prospectus) and current progress (for example, but not limited to, background information, objectives of the project, description of

experimental activities, potential outcomes, and any preliminary evidence). The oral examination immediately follows the public seminar and is attended only by the supervisory committee (all members must attend). The student and chair (and co-chair if appropriate) must be in the same physical location. With the approval of the entire committee, other committee members may attend remotely.

Following the exam, the committee should discuss the performance of the student and determine whether the student could be advanced to candidacy. If a student fails the qualifying examination, a re-examination may be requested, but it must be recommended by the supervisory committee. At least one term of additional preparation is needed before re-examination.

Students are required to obtain the “Admission to Candidacy” form with the Academic Coordinator. The form needs to be signed by all the committee members at the end of the oral exam and turned in to the Academic Coordinator for submission to the Graduate School. Students are responsible for making oral presentation arrangements (date, time, place, mode of delivery, title, printing of forms, and other details) a minimum of two weeks in advance and communicating them to the PBGP Academic Coordinator accordingly so the seminar can be announced.

## 5. ADMISSION TO CANDIDACY

Doctoral students who have a satisfactory academic record, an approved dissertation topic, and have successfully completed the qualifying examination will be advanced to doctoral candidacy by recommendation of the supervisory committee. Doctoral candidates will be able to enroll for credits in PLS 7980 Doctoral Research. Graduation is not allowed before two terms after the qualifying examination. However, the term in which the student passed the qualifying can be counted as one of these terms, provided that the exam took place before the midpoint of the term. All work for the doctorate must be completed within 5 calendar years after the qualifying examination, or the qualifying examination must be repeated.

## 6. DOCTORAL DISSERTATION

As a requirement for graduation, Ph.D. candidates will need to write a dissertation describing their doctoral research. The material in the dissertation is required to be the student's original work. If the student has one or more submitted or published manuscripts as the first author, these could be included in the dissertation following the Graduate School Editorial Office guidelines.

The work must be of publishable quality and must be in a form suitable for publication, using the Editorial Office's format requirements. The student is responsible for achieving the level of quality and scholarship required, and the supervisory committee is responsible for ensuring that the quality and scholarship of the dissertation meet both the PBGP and Graduate School expectations.

The Graduate School [Editorial Office](#) oversees the dissertation submission process and offers guidance for electronic submission and digital archiving with the UF libraries. **Students must strictly abide by the [Thesis and Dissertation Office](#) official procedures provided on these clickable links: [Formatting Guidelines](#),**

[Editorial Office Deadlines](#), [Ph.D. Dissertation Checklist](#), and [Graduation Checklist](#). The [Application Support Center](#) also offers assistance with online tutorials, one-on-one consultations, informational seminars, and formatting templates. The student and respective chair are responsible for following all these official regulations and guidelines to ensure compliance and acceptance of the dissertation in a timely manner. However, keep in mind that the Editorial Office editors do not examine or critique content, scholarship, research methods, or writing style, which is the responsibility of the student and their supervisory committee.

## **7. SUBMIT MANUSCRIPT TO PEER-REVIEWED JOURNAL**

Students are required to prepare and submit at least one manuscript for publication as a first author in a scientific peer-reviewed journal before their final defense.

## **8. FINAL EXAMINATION**

Upon completion of the dissertation, doctoral candidates will be given a final examination by the supervisory committee. The dissertation must be presented to the supervisory committee at least 14 days prior to the defense. The candidate and the supervisory committee chair (or co-chair) must both be physically present at the same location. Other members of the committee may attend the defense remotely, using modern communication technology. The defense should be no more than 6 months before the degree is awarded.

Several forms need to be prepared and submitted during the term of the intended degree award following the [Graduate School Editorial deadlines](#). The forms that should be signed at the defense are: 1. UF Publishing Agreement Form (signed by the candidate and the supervisory committee chair), and 2. ETD Signature Page, and 3. Final Examination Report (entire supervisory committee signs these last 2 forms). If dissertation changes are requested, the supervisory committee chair or his/her designee may hold the ETD Signature Page until all are satisfied with the dissertation.

## **9. ANNUAL STUDENT EVALUATION AND IDP**

Written graduate student evaluations are administered once a year to review each student's progress in their research project and degree requirements. These evaluations are mandated by the UF Graduate School in order for continued employment as a graduate research assistant. They must be signed by the student and their advisor. PBGP evaluations are usually due on (*date TBD*). These evaluations will assess the student's academic performance and job performance as a graduate assistant or fellow. The employment evaluation includes an assessment of assigned duties and responsibilities appropriate to the assignment, including, but not limited to, the employee's productivity, quality, and quantity of work and research, and other creative programs and contributions. The Annual Evaluation for PBGP Graduate Students can be found in Appendix III.

All Ph.D. students must develop an individual professional development plan (IDP) with input from their

major advisor. The [Graduate School policy](#) explains the rationale for this requirement. Briefly, the goal of an IDP is for students to: 1.) reflect on their values, interests, and professional goals, 2.) self-assess their competency in important professional skills, 3.) develop a plan to enhance those skills with input from their supervisor and other mentors, 4.) work through the plan utilizing resources provided by advisors, the department, college, university, or other sources, and 5.) review and revise the plan annually.

The template and resources to help students develop professional skills are located on the College of Agricultural and Life Sciences [IDP webpage](#). Additional resources are provided on the Graduate School's [Professional Development](#) webpage. Evidence of a plan and an annual evaluation are due in the Academic Coordinator's office by *(date TBD)*.

## **10. EXIT INTERVIEW**

At the conclusion of the degree program, each student is expected to have an exit interview with the PBGP Director and Academic Coordinator. Exit interviews should not be scheduled until the final dissertation has been submitted and approved by the Editorial Office.

## **11. PLANT BREEDING WORKING GROUP (PBWG) ANNUAL MEETING**

The Plant Breeding Working Group holds a joint workshop with the UF Plant Science Council (PSC) every year usually in late July or early August. All PBGP students are required to participate in this annual meeting. PBGI- and CALS Dean's Award-funded students are required to turn in a 1-2 page progress report prior to the meeting and to deliver a brief oral presentation during the meeting.

## **V. REGISTRATION**

Students register for courses every semester using the [ONE.UF](#) portal during the specified periods established by the [Office of the University Registrar](#). ONE.UF gives access to class schedules, transcripts, grades, fees, campus finances (Bursar), the student holds and other important information. Students are required to update their emergency contact information and fill out a Registration Preparation at ONE.UF before being able to register. UF requires an updated immunization record before new students can register for classes. The detailed information by the Student Health Care Center is provided [here](#).

Students are responsible for making sure they are registered for the correct number of credits every semester and also comply with [UF's dates and deadlines](#) to avoid late fee penalties. Students on appointment are financially liable for credits in excess of the required number. If a student on appointment drops below the required registration at any time in the semester, the student becomes financially liable for the entire registration. Students who do not register properly are not permitted to remain on appointment. Read more on section *VI.B.1. Minimum Registration* on page 17.

When registering for classes, carefully check all course class numbers. If a number is shown you can register for the classes yourself. If a number is not shown, it means the course is controlled by the

specific department offering the course. In this case, the student should contact the listed department or instructor(s) to request registration.

Every University of Florida student is required to have a GatorLink email account and to keep up with it regularly. The GatorLink username and password serve as the log in for registering for classes with [ONE.UF](#). All official communications from the University of Florida, deadline reminders, cancelling of classes, or policy announcements, are sent straight to the GatorLink account. Click [here](#) to set up a GatorLink account. Students may also request a [Gator 1 Card](#), the official University of Florida picture ID card. Many activities on campus are only available upon presentation of the Gator 1 Card, such as using the libraries, riding free on RTS buses, using all UF recreational facilities, among others.

## VI. FINANCIAL SUPPORT

As part of their offer to join the PBGP Program at UF, students may be offered financial support by being appointed as graduate assistants (GAs) or fellows. Assistantships may originate from funds provided by state and federal governments, industry, and foundations, or a combination of these. PBGP offers two in-house awards (PBGI and the CALS Dean's Award, below). Assistantships may also be funded through grant funds and/or fellowships controlled by the faculty researcher. The awarding of these assistantships is controlled by the faculty member or members who have the grant funds.

### A. PBGP AWARDS

#### ***Plant Breeding Graduate Initiative (PBGI):***

This award annually funds three to four graduate assistantships (stipend and tuition for 4 years) for highly qualified students with an interest in cultivar development. These programs are expected to be transdisciplinary and are designed to expose students to the use of novel approaches focused on germplasm improvement and cultivar release. Funding for these scholarships is provided by the UF/IFAS PBWG and UF/IFAS Dean for Research and are awarded directly to PBGP faculty. The PBGI faculty awardee will initially identify, screen, interview and nominate qualified applicants to the admission committee, which will then review the applicant's qualifications and, if appropriate, grant enrollment into the PBGP.

#### ***CALS Dean's Award:***

This award provided by the CALS Dean's Office offers one graduate assistantship (stipend and tuition for 4 years) to our most competitive, top-qualified applicant. Top applicants will be selected by the admission committee and must have identified a program/faculty that they will join. In addition to meeting the general admission criteria, the successful CALS Dean's Award recipient should have:

- A master's degree in an appropriate field (plant breeding or closely-related biological sciences area)
- Publication(s)
- Good grades in relevant courses related to plant breeding
- Outstanding Statement of Purpose
- Outstanding Letters of Recommendation
- Excellent communication skills



## B. GRADUATE ASSISTANTSHIP

When offered a graduate assistantship, each student receives a *Letter of Admission* and a *Letter of Employment (or Appointment)*. The Letter of Employment is a formal contract between UF/PBGP and the student that is regulated by the [Graduate Assistants Union \(GAU\) Collective Bargaining Agreement](#). The Letter of Employment stipulates the terms of the contract, including title, FTE (full-time equivalent), annual rate of pay, frequency of payment, beginning and end dates, and provides further details on duties, responsibilities, and evaluation date.

Graduate assistantships are jobs; therefore, a student is expected to work the time equivalent to his/her full-time (40-hour) equivalent (FTE) appointment. For example, a student on a 0.5 FTE assistantship is expected to work a minimum of 20 hours per week (0.5 FTE x 40 hr./week) on activities, such as research and service, or grant objectives, as determined by the student's advisor.

Assistantships should be viewed as opportunities to earn wages while students pursue their graduate programs and should not be interpreted as funding to pursue a student's own research program. Unless otherwise indicated in the Letter of Appointment or a contractual agreement, activities performed with assistantship funding may or may not be in line with the student's existing or projected research interests. There will often be occasions when students are offered assistantships to perform professional duties that are only indirectly related to their research program plan. When assistantship duties and students' research goals do not overlap significantly, students are expected to work with their advisor to delineate specific responsibilities.

PBGP has no internal requirement for students to serve as Teaching Assistants (TAs). However, teaching opportunities are available and strongly encouraged when they fit the student's career goals. The exception is for students awarded the CALS Dean's Award, which requires recipients to help teach courses for a minimum of 2 semesters.

### 1. REQUIRED REGISTRATION

Graduate students on assistantship or fellowship must be registered for the appropriate number of credits to qualify and maintain their assistantship/fellowship funding and tuition waiver (see below). Most appointments funded by PBGP are treated as graduate assistantships. Examples of fellowships are the McKnight Fellowship and NSF Fellowship.

Required credits by appointment type	Fall	Spring	Summer C
<b>Assistantship</b>	<b>9 credits</b>	<b>9 credits</b>	<b>6 credits</b>
Fellowship	12 credits	12 credits	8 credits

The Letter of Employment is the official contract between the student and UF/PBGP and it is renewed each year pending (1) satisfactory progress in the research program, as determined by the major advisor,

(2) **required registration** (as mentioned above), (3) maintenance of an overall graduate GPA of 3.0 or higher, and (4) reasonable progress toward the student's degree, as determined by the graduate supervisory committee.

Students on appointment are financially liable for credits in excess of the required number. If a student on appointment drops below the required registration at any time in the semester, the student becomes financially liable for the entire registration. Students who do not register properly are not permitted to remain on appointment.

## 2. STIPEND

Assistantships and fellowships include an annual salary (stipend) and a tuition waiver. The student's stipend is stated in the Letter of Appointment and paid bi-weekly through the UF Direct Deposit system. In order to receive their stipend, students must be formally hired upon arrival in Gainesville or their REC units. Students should contact the Academic Coordinator to complete the appropriate paperwork with the Fifield Shared Services Center - HR. This process may take 6 to 8 weeks for U.S. citizens and up to 12 weeks for international students.

International students need to obtain a social security number (SSN) card in order to be hired by PBGP and be on the University of Florida payroll system. Please see section VIII. International Students on page 20 for more information.

## 3. TUITION

Students on assistantships or fellowships have their tuition waived. That means tuition is paid by either PBGP funds, funds from the advisor, or a combination of these. In order to maintain an assistantship or fellowship, students must make satisfactory progress in their research program, be properly registered, maintain an overall graduate GPA of 3.0 or higher, and make reasonable progress toward their degree. Once again, assistantships and fellowships are contracts and are renewed every year, upon meeting the requirements specified above. Tuition waivers and appointments are processed every semester by the Academic Coordinator. Please note that if a student withdraws from the program or the appointment is terminated prior to the end of a semester, the tuition waiver will be revoked, and the student will be financially responsible for the total tuition amount incurred for that semester.

## 4. STUDENT FEES

Student fees (health, athletic, activity, and service fees) **are not** included in the tuition waiver and must be paid each semester. These fees are calculated on a per credit basis. Students should refer to their Letter of Employment to check if they are responsible for paying student fees. Students who are required to pay their portion of student fees must do so each semester regardless of the status of the tuition waiver. Check the [University Bursar](#) website to calculate the fee amount due and the payment deadline.

## 5. LEAVES OF ABSENCE AND UNPAID LEAVE

As specified in the [GAU Contract – Article 8](#), graduate assistants are entitled to five days of paid leave for every term (fall, spring, or summer C). These days are not cumulative and are only effective for the term. The contract also lists a number of situations that entitle graduate assistants to unpaid leave. However, regardless of the occasion, students are expected to notify and obtain approval for all leave with their advisor. Unexcused absence for more than three consecutive days is cause for dismissal from an assistantship. Misconduct or underperformance are considered justifiable causes for disciplinary actions, which could range from reprimand and suspension to termination. Students are entitled to a grievance process described in detail in the Agreement.

## 6. HEALTH INSURANCE

The University of Florida has a mandatory health insurance requirement managed by the [UF Health Compliance Office](#). All UF students, including newly admitted domestic and international students, are required to show proof of adequate health insurance. For details about health insurance requirements and plans read [Health Insurance Requirements](#). Basically, students may opt to either i) show proof of comparable insurance coverage, ii) purchase the UF mandatory health insurance plan administered by [UnitedHealthcare Student Resources](#), or iii) enroll in GatorGradCare.

[GatorGradCare](#) is the health insurance plan created specifically for University of Florida graduate assistants, teaching assistants, and research assistants appointed .25 FTE or greater. GatorGradCare coverage is based on the eligibility status of a graduate student. To be eligible, students must be enrolled in a graduate degree program, have an appointment through the University of Florida, be appropriately registered in classes and be appointed 0.25 FTE (full-time equivalent) or greater for a particular semester. PBGP students are typically appointed as graduate assistants (either GA or GA-R) and therefore eligible to participate in the GatorGradCare health insurance plan, which meets the UF mandatory health insurance requirement.

Visit [GatorGradCare](#) for detailed information on eligibility, enrollment, benefits, ID Cards, dependent coverage and more. Effective August 2018, a nominal monthly premium for individual coverage, will be collected through payroll deduction. GatorGradCare enrollees who include coverage for their dependent(s) on their online enrollment are responsible for the dependent premium.

Enrollment in GatorGradCare is not automatic. Current students need to enroll annually or every academic semester. Newly hired Graduate Assistants have 60 days from their date of hire to enroll in GatorGradCare if they want to participate. The enrollment portal in myUFL opens for newly hired GAs after the GA job appointment is entered and activated in the UF PeopleSoft/payroll system. Click [here](#) to enroll.

Students who have health insurance, including GatorGradCare, must complete an **insurance waiver once a year** to opt out of the United Healthcare policy. The waiver must be completed online by Fee Payment

Deadline (September 3, 2021). Click [here](#) to submit a waiver. Completion of the waiver does not enroll you in GatorGradCare.

## VII. HONOR CODE AND PLAGIARISM

All students, staff and faculty members, and administrators in the PBGP follow the honor code of academic honesty as outlined by the [UF Dean of Students Office](#).

**Preamble:** In adopting this Honor Code, UF students recognize that academic honesty and integrity are fundamental values of the University community. Students who enroll at the University commit to holding themselves and their peers to the high standard of honor required by the honor code. Any individual who becomes aware of a violation of the honor code is bound by honor to take corrective action. The quality of a University of Florida education depends on community acceptance and enforcement of the honor code.

**The Honor Code:** *We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.*

On all work submitted for credit by students at the University, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment."

The University requires all members of its community to be honest in all endeavors. A fundamental principle is that the whole process of learning and pursuit of knowledge is diminished by cheating, plagiarism, and other acts of academic dishonesty. In addition, every dishonest act in the academic environment affects other students adversely, from the skewing of the grading curve to giving unfair advantage for honors or for professional or graduate school admission. Therefore, the University will take severe action against dishonest students. Similarly, measures will be taken against faculty, staff and administrators who practice dishonest or demeaning behavior.

**Student responsibility:** Students should report any condition that facilitates dishonesty to the instructor, department chair, college dean or Student Honor Court.

**Faculty responsibility:** Faculty members have a duty to promote honest behavior and to avoid practices and environments that foster cheating in their classes. Teachers should encourage students to bring negative conditions or incidents of dishonesty to their attention. In their own work, teachers should practice the same high standards they expect from their students.

**Administration responsibility:** As highly visible members of our academic community, administrators should be ever vigilant to promote academic honesty and conduct their lives in an ethically exemplary manner.

**Student Conduct Code:** Students enjoy the rights and privileges that accrue to membership in a university community and are subject to the responsibilities that accompany that membership. For a system of effective campus governance, it is incumbent upon all members of the campus community to notify

appropriate officials of any violations of regulations and to assist in their enforcement. The University's conduct regulations, available to all students in the UF Student Guide, are set forth in Florida Administrative Code. Questions can be directed to the [Dean of Students Office](#).

Any violations of the honor code, in particular plagiarism in research documents, theses, dissertations, manuscripts, publications, presentations, and course work, will be rigorously addressed following steps outlined by the [judicial process for honor code violations](#). Students must exercise great care with regard to plagiarism. *Plagiarism is defined as the act of using the language and/or thoughts of another author, without crediting them, and representing the work as your own.* In other words, your writing must be original and cannot directly copy sections of text published elsewhere. There are different cultural tolerances for “borrowing” text from published sources. It is important to understand that in written assignments no published text may be directly installed into your own work. Librarians at Marston Science Library have created a resource guide on [Responsible Conduct of STEM Research](#).

## VIII. INTERNATIONAL STUDENTS

The [UF International Center](#) (UFIC) is responsible to assist all international students with the required immigration documents to study in the United States and ensuring the integration of international students and families into the life of the University of Florida and the American culture. UFIC provides many resources and information for students seeking an [F-1 visa](#) or [J-1 visa](#). International students are urged to get familiar with these resources and are expected to comply with policies, rules, and regulations set forth by the UFIC. International students are also required to complete a check-in procedure with the UFIC as soon as they arrive in Gainesville. Check the F-1 check-in [here](#) and the J-1 check-in [here](#). A map to the HUB – UFIC can be found [here](#) (note that Fall 2021 check-in will be online only – no in-person check-in). International students are mandated by law to have health coverage during the entire year, including annual breaks. Annual enrollment in GatorGradCare will fulfill this requirement. Click [here](#) for more information.

## IX. OBTAINING FLORIDA STATE RESIDENCY

Graduate students who are United States citizens or permanent residents may apply to become in-state residents for tuition purposes. For more information click [here](#).

## X. STUDENT COUNSELING & SUPPORT SERVICES

The University of Florida knows that the well-being of its students plays a major role in their academic, professional, and personal success. With this in mind, UF provides its graduate students with a number of services that aid in maintaining a safe, healthy lifestyle and enriching personal life. A few of them are:

- [Counseling & Wellness Center](#)
- [U Matter We Care](#)
- [GatorWell](#)
- [Student Health Care Center](#)
- [Dean of Students Office](#)