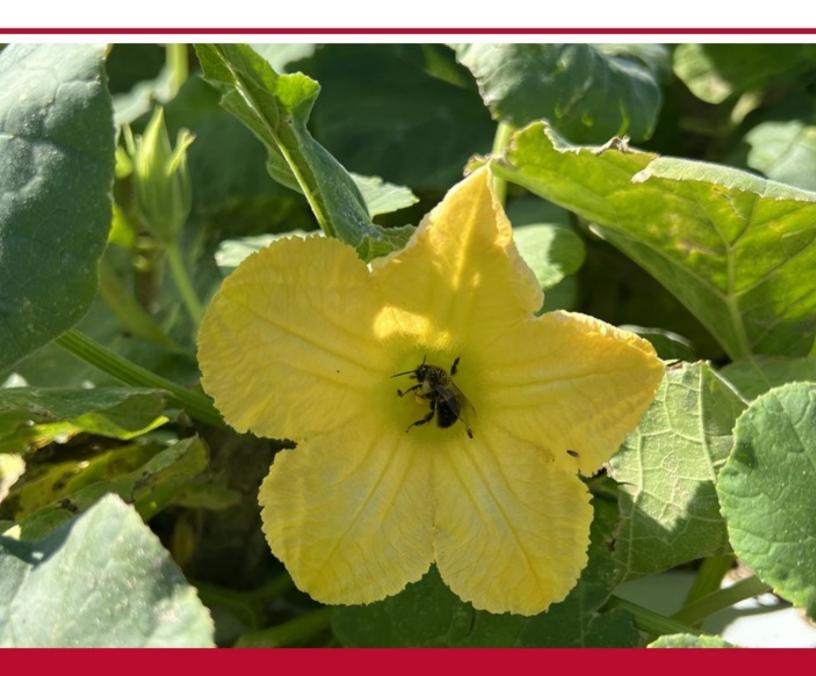


Institute of Plant Breeding Genetics and Genomics

College of Agricultural & Environmental Sciences

UNIVERSITY OF GEORGIA



Graduate Student Handbook

Revised Fall 2023

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Program information

The <u>Institute of Plant Breeding</u>, <u>Genetics & Genomics</u> (PBGG) offers a Master's degree and a Doctorate of Philosophy in Plant Breeding, Genetics & Genomics. It is the IPBGG philosophy that all its students need enough background to be conversant with each other, whether they are more interested in the plant breeding or the genetics & genomics aspects. The curriculum is designed accordingly.

There is an overall core curriculum for each degree that ensures broad training, while providing the flexibility to emphasize topical areas of greatest interest to individual students. Each student will conduct their thesis or dissertation work under the supervision of their Major Professor and Advisory Committee.

General Information

Major Professor

The Institute does not routinely sponsor lab rotations for incoming graduate students. Graduate students need to identify a Major Professor before they are accepted by the Institute. Although students may change Major Professors, most assistantships and other sources of funding may not be transferable among faculty. No faculty member is required to serve as the major professor for any student.

Graduate Coordinator

The Graduate Coordinator is appointed by the Dean of the Graduate School upon the recommendation and approval by the Institute director and academic dean. The coordinator acts as a liaison between the Graduate School and the Institute. The Graduate Coordinator's duties are to sign documents regarding graduate student activities and maintain official Institute graduate student documents. The current Graduate Coordinator for IPBGG is Dr. Esther van der Knaap.

General Expectations of all Students

Not only will graduate students be learning new techniques and information, graduate school is a period when students get to hone their scientific reasoning, organizational, and team-working skills. To gain full advantage of the experience, students should take ownership of their research and education, and acknowledge that they have the primary responsibility for the successful completion of their degree.

Accordingly, students should attend and actively participate in all lab meetings, smaller group meetings, and lab activities; maintain detailed, organized and accurate lab records, and be responsive to advice and constructive criticism.

During their graduate career, students are expected to learn to plan, design, analyze and conduct high quality scientific research, including lab, greenhouse and field experiments; learn how to present and document their scientific findings; be engaged with their research group and others in the plant science community at UGA; and keep up with the literature so that they can actually advance their field in a meaningful and impactful way.

Research Assistantships

The Institute does not have standing assistantships, but most graduate students receive financial aid in the form of Graduate Research Assistantships (GRAs) from their Major Professor. All students receiving a GRA receive out-of-state tuition waivers and in-state tuition fee reductions of \$25 per semester. All students will still pay mandatory fees. Please see the Bursar's page for

additional information on these fees. In addition, all graduate students on graduate assistantships are required to enroll in a mandatory health insurance program (or opt out) that is partially subsidized by the University. Additional information on health insurance can be found at the <u>Human Resources</u> web page. Renewal of a GRA beyond the 1st year is contingent upon adequate progress towards degree and satisfactory job performance.

Work Requirements

Assistantships are part-time jobs to help students defray the cost of their education, and thus unrelated to their thesis/dissertation research. IPBGG MS students receive—as a minimum – a 41.61% GRA, which require 16.6 hours of work on average (some weeks may require more; some may require fewer). The minimum GRA for Ph.D. students is 41.24%, equivalent to 16.4 hours of work per week on average. The type and schedule of work is solely at the discretion of the Major Professor.

Thesis/Dissertation Research

Thesis/dissertation research is a degree requirement, not a job responsibility. A student with an assistantship has responsibilities *in addition to* their thesis/dissertation research responsibilities.

Institutional Affiliation

All PBGG majors are affiliated with the Institute of Plant Breeding, Genetics & Genomics. All students should use their institutional affiliation in all their correspondence and meeting presentations. Use the <u>UGA Email Signature Builder</u> to obtain signature text for use with your emails.



Data Ownership

Research notes, data, and reports are owned by UGA and must be left with the Major Professor when the student graduates or leaves the program. A student may take copies, not originals.

Vacation Time

Graduate Research Assistants do not earn vacation time; nevertheless, IPBGG recognizes time off is necessary for mental health. Vacation/time off must be coordinated with the Major Professor. Plan ahead of time and let your Major Professor know at least one month in advance.

Leave of Absence

Paperwork required: Fill out the <u>Request for Leave of Absence from Graduate Enrollment</u> (G133) form.

A leave of absence provides a mechanism for students experiencing unusual circumstance to be exempt temporarily from the continuous enrollment policy. A leave of absence requires approval of the graduate program coordinator and the dean of Graduate School. A leave of absence will be granted only for good cause such as serious medical and health-related issues, major financial and employment issues; pregnancy, childbirth, child care, elder care, and other significant family issues; and other major personal circumstances that interfere with the ability to undertake graduate study. An approved leave of absence does not stop the clock unless the leave is granted for pregnancy, childbirth or adoption (see below): time on leave counts toward any University, Graduate School, or program time limits pertaining to the degree being sought.

Course Registration & Minimum Enrollment

Students on a graduate assistantship must register for a minimum of 12 hours during Fall and Spring semester, and a minimum of 9 hours during Summer session, which is considered full time. However, the recommended number of hours is 16-18 during spring and fall, and 12 during summer. The maximum semester course load for any student is 18 hours per semester and 6 hours during the Maymester session. Students should enroll for classes at least 1 month prior to the start of each semester.

All enrolled students pursuing graduate degrees must register for a minimum of 3 hours of credit during any semester in which they use University facilities and/or faculty/staff time. This includes semesters in which they are completing comprehensive examinations and defending their thesis or dissertation. Students who do not have an assistantship must register for a minimum of 3 hours.

Continuous Enrollment Policy

All enrolled graduate students must maintain continuous enrollment from matriculation until completion of all degree requirements. Continuous enrollment is defined as registering for a minimum of three (3) credits in at least two semesters per academic year (Fall, Spring, Summer) until the degree is attained or status as a degree-seeking graduate student is terminated. Doctoral students must maintain enrollment during fall and spring semesters (breaking only for summer semesters) until the residency requirement has been met. All students must be enrolled for at least three graduate credits in the semester in which degree requirements are completed.

Industry Internships & Teaching Practicum

The IPBGG offers internship credit (as PBGG 9980) for those students who want internship experience with industry. For those interested in a teaching career, consider taking a teaching practicum (as PBGG 9990) with a suitable professor. More details are in the course catalog.

Most of the major seed and biotechnology companies host student interns throughout the year. Information is usually posted in the job section of the company web sites, and applications are normally due in approximately an October-November timeframe, but can vary depending on the company.

Institute Seminars

Seminars can be a major source of information delivery that complements information obtained in the classrooms. All full-time graduate students are expected to attend the regularly scheduled Institute seminar series if at all possible, and sign-in is required at each seminar. Exceptions are those students who have a conflict in class scheduling. Students who regularly cannot attend seminar should notify the IPBGG Administrative Manager.

Annual Retreat

Annual retreats are an important part of the educational experience and help promote teamwork and cohort formation. All students are expected to attend the IPBGG annual retreat unless they have a valid excuse, in which case they should notify the IPBGG Administrative Manager. Graduate students also play a key role in planning the retreats, the planning of which rotates among the three campuses.



The Annual Boerma Symposium

This symposium alternates between Athens and Tifton, and is primarily planned and executed by the graduate students. Because the main purpose is to benefit graduate students, the IPBGG will cover the attendance costs for IPBGG students at other campuses.

Network!

It is prudent for students to start establishing relationships with possible future employers. Take advantage of all Plant Center and IPBGG events that bring industry representatives to campus, and introduce yourself to them. The same goes for professional meetings- do not be afraid to approach any of the attendees, particularly if you like their work or would like information from them. Follow up with an email to speakers introducing yourself and complimenting their talk/message. To help with networking, IPBGG graduate students are eligible for 250 <u>business cards</u> upon request.

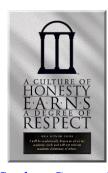
Adherence to UGA policies

Students are expected to demonstrate professional behavior while enrolled in the graduate program and to act in a manner that demonstrates integrity and respect for others and the campus environment.

- Non-Discrimination and Anti-Harassment Policy
- Student Conduct Code
- Work Place Violence Policy

Academic Honesty

Every student agrees to abide by <u>UGA's Academic Honesty Policy</u>. It is the student's responsibility to become familiar with the policy. The policy is located on the Office of Instruction website. Violation of academic honesty may result in the following: Receipt of a failing/unsatisfactory assignment or course grade, placement of a dishonesty notation on transcript, suspension, dismissal, or expulsion.



Mental Health and Wellness Resources

If you or someone you know needs assistance, you are encouraged to contact <u>Student Care and Outreach</u> in the Division of Student Affairs at 706-542-7774. They will help you navigate any difficult circumstances you may be facing by connecting you with the appropriate resources or services.

- If you need help managing stress, anxiety, relationships, and others, please visit BeWellUGA for a list of FREE workshops, classes, mentoring, and health coaching led by licensed clinicians and health educators in the University Health Center.
- Additional resources can be accessed through the UGA App.

Disabilities Statement

Students with a documented disability by the UGA <u>Disability Resource Center</u> should contact the Institute of Plant Breeding, Genetics, and Genomics administrative manager at pbgg@uga.edu or 706-542-5607. Please note that the IPBGG is unable to accommodate any disability without documentation from the Disability Resource Center.

Graduate Student Files

Graduate student files are maintained in the Institute main office in Athens. The Graduate Coordinator and Administrative Manager are responsible for their safekeeping.

Satisfactory GPA

A student must maintain a 3.0 (B) average on the graduate transcript and a 3.0 (B) average on the program of study. Graduate students whose cumulative GPA falls below 3.0 will be placed on academic probation by the Graduate School. If their GPA is still below 3.0 after a semester on probation, they will be dismissed from the Graduate School.

Unsatisfactory grades for PBGG 7000/9000

When a student earns a grade of 'U' in PBGG 7000/9000, the advisor should explain the reason for the grade, and provide expectations the student needs to follow to make satisfactory progress and specify by the end of the following semester. Continued unsatisfactory performance may be grounds for dismissal from the program.

Annual Progress Evaluations

Paperwork required: The major professor must fill out the <u>Annual Evaluation of Progress</u> form and review with the student by May 30 of every year.

All graduate students are required to have an annual evaluation of their progress towards accomplishing their degree objectives. This evaluation will be conducted in May; more frequent evaluations may be requested by the student or Major Professor. If requested by the student or the Major Professor, the Graduate Coordinator or Institute Director head will be present at the evaluation. After the evaluation, the Major Professor and student will sign the evaluation form and send a copy to the Program Manager to be included in the student's file. The student's signature does not signify agreement with the evaluation- it merely signifies that the evaluation took place.

In case of a generally 'poor' or 'deficient' evaluation, the Major Professor should enumerate in writing clear guidelines the student needs to follow in order to make satisfactory progress and specify a clear time frame in which the student must show adequate progress. Examples of guidelines may include specific research tasks to be completed, courses to be taken, grades to be achieved in particular courses, or others. A copy of these guidelines should be sent to the Program Manager together with the evaluation.

Dismissal from Graduate Program

A student failing to make adequate progress towards degree objectives may be dismissed from the graduate program by the Graduate Committee in consultation with the student's Major Professor. There are two types of dismissal; one is failure to make progress toward degree, which is the purview of the Institute, and includes dismissal for failing the written or oral comprehensive exams more than once each. The second is failure to maintain satisfactory grades for more than one semester. This is an automatic dismissal by the Graduate School.

Request for Reconsideration by Graduate Committee

A student dismissed from the PBGG graduate program (not to be confused with being dismissed from the UGA Graduate School) may submit a letter to the Graduate Committee to ask for reconsideration if the letter provides new information regarding reasons for the failure to make adequate progress towards their degree.

Dismissal Appeal to the Institute

If the dismissal is upheld by the Graduate Committee, a student dismissed from the PBGG graduate program may submit an appeal letter to the Institute Director. Upon receipt of the appeal letter, the Institute Director will appoint a committee of three faculty members not serving on the Graduate Committee to handle the appeal. The appointed committee will decide based on information obtained from the student, their Major Professor, and the Graduate Committee.

Dismissal Appeal to the Graduate School

Dismissal by the Institute may be appealed to the dean of the Graduate School after all avenues of appeal have been exhausted within the Institute. When students are terminated by the Institute, but not simultaneously by the Graduate School, they may apply for admission to another graduate program if they wish to do so.

IPBGG resources

PBGG Graduate Student Association

All PBGG graduate students are strongly encouraged to participate actively in the PBGG Graduate Student Association (PBGG GSA).

The PBGG GSA is an organization made up of all graduate students and open to post-docs and staff members in the department. The PBGG GSA exists to provide a framework for developing professional, academic, and social networks and to foster an inclusive environment for graduate students, in recognition of the importance of positive peer relationships. The GSA also advocates for graduate students at the Institute and University levels. The GSA is led by a group of student officers who are elected every spring at the PBGG Annual Retreat. PBGG GSA



leadership committee is made up of a president, three vice-presidents representing each of the campuses where PBGG students are located (Athens, Tifton, and Griffin), a secretary, treasurer, journal club chair, social chair, webmaster, fundraising chair, and GSA delegate. Further descriptions of each of these roles and the overall mission of the organization can be found in the PBGG GSA Constitution. Current officers are in the photo.

Photo Contest

The GSA hosts regulator photo contests with cash prizes. Check out the <u>guidelines</u>. Note the extra award for photos selected by the webmaster to serve as the website banner photo.

Travel support

The IPBGG encourages its graduate students and postdoctoral scientists to gain experience in presenting their work and gaining exposure to other audiences. Therefore, a student or postdoctoral scientist presenting a paper or poster at a professional conference may apply for a travel award from the Institute to help defray the cost of travel. The guidelines below will be used in considering all travel requests. Up to 40 requests that meet these guidelines will be honored for requests made before March 15. After that, fund availability will determine if any additional awards can be made the rest of the fiscal year.

- Applicants must be reporting results of their research and be the primary author of the oral or poster presentation.
- The meeting or conference must be of regional, national, or international importance. Commodity-specific meetings also qualify.
- Applicants are limited to one travel award per UGA fiscal year (July 1 through June 30).
- Up to \$1000 may be requested for domestic and \$1500 for international travel.
- The applicant should send a brief paragraph addressed to the Institute Director naming the conference, the presentation to be given, and a breakout of anticipated costs.
 - Accompanying the request should be evidence that the research has been accepted for presentation along with a copy of the abstract to be presented.
 - The recipient must explicitly agree to identify the IPBGG as one of their affiliations, and to display the IPBGG logo in their slides or poster.
- Graduate students must be PBGG majors and in good standing within the Institute, which includes routine seminar attendance in person and attendance at the previous retreat unless a valid excuse is provided for not having attended.
- Please submit travel requests to the IPBGG Administrative Manager, (pbgg@uga.edu) at least one month prior to the beginning of the trip.

Alternatively, PBGG faculty, staff, students, & postdocs may request up to \$1000 domestic or \$1500 international in funding to help defray the cost of a study visit to another lab. The goal is to facilitate the acquisition of new training or skills not available on campus, and not the conduct of on-going research. Applicants should send a brief letter addressed to the Institute Director describing the purpose or goals of the study visit and a breakout of anticipated costs. Students and postdocs must be in good standing as described above.

Meeting these criteria is not a guarantee of funding. Funding is contingent on availability of funds in the Institute. Institute funding may be added to travel assistance from other sources. Funding recipients are strongly encouraged to use these funds to match travel fund requests from the UGA Graduate School.

Poster Printing

- Students in Athens have access to the CAGT printer via the on-line request form.
- Those in Tifton should contact Michelle Cooper (mcooper@uga.edu)
- Those in Griffin should contact William Lee Taylor (<u>taylor68@uga.edu</u>)

Additional poster printing capacity is available through the <u>Graduate School</u> and the <u>Tate Center</u>, and businesses like <u>Kinkos/FedEx</u>.

Watch and Learn

Check out the IPBGG <u>library of YouTube</u> video clips on methodology. They are contributed by students as part of their Plant Breeding Practicum.

CAES Resources

Greenhouses and Growth Chambers

The college has numerous greenhouses and growth facilities in all campuses. Those in Athens can be <u>reserved and used</u> for a fee.

Experiment Stations and Research & Education Centers

The CAES maintains <u>experimental farms</u>—available for research – at all the major ecological zones of Georgia.



Additional Resources

Statistical Consulting Center

<u>The Statistical Consulting Center</u> will help students plan and design their experiments and analyze their data. Consult before you start!

The Plant Center

The <u>Plant Center</u> connects IPBGG students with the larger plant science community on campus through a spring symposium and a fall retreat. All IPBGG students are strongly encouraged to participated in the Plant Center.



Graduate School Travel grants

The Graduate School also offers Travel Grants. IPBGG travel funding can be used as matching funds. Check the <u>Graduate School Travel Grant website</u> for deadlines and conditions

UGA Core Facilities

Need specialized equipment, access to analytics or electron microscopy? Check out the 16 specialized <u>core facilities</u> on campus.

Build your CV

IPBGG Scholarship Awards

The IPBB offers 3 scholarship awards, worth \$2500 each, to its best students every year. These are the:

- Glenn and Helen Burton Feeding the Hungry Scholarship Award
- Roger and Cindy Boerma Plant Breeding Excellence Scholarship Award
- Peggy Ozias-Akins Leadership in Science Award







Applications are due November 1 every year. Application instructions are on the <u>IPBGG</u> website.

The John Ingle Innovation in Plant Breeding Awards

These awards provide IPBGG graduate students with seed monies with which to pursue their own research directed at novel plant breeding approaches.

Applications are due May 30 every year. Application instructions are on the IPBGG website.



Cultivate

Let the college make and feature your professional profile on **Cultivate!**

Broadus Browne Research Awards

These are the college's top research awards for its graduate students, named after plant breeder and first director of the Georgia Experiment Station in Athens. Applications are due the last Friday in January instructions are on the Broadus Brown award website.

As each unit can only submit 1 MS and 1 PhD nominee, PBGG students wishing to be considered must submit a draft of their application materials by Dec 15, and the Steering Committee will select the final nominees from IPBGG.



Borlaug Scholars

These are awarded by the NAPB, and the intent is to help train and prepare students interested in industry careers. Applications usually accepted Dec through early March. Check the NAPB <u>Borlaug Scholar website</u> for the latest guidelines.



FFAR Fellows

This fellowship's purpose is to train future leaders in agriculture. Applications usually start around November. Check the <u>FFAR Fellows website</u> for the latest guidelines.



Students selected as FFAR Fellows need \$15,000 to cover the costs. The IPBGG and CAES will split this cost, thus ensuring every student can afford this fellowship if selected.

NSF Graduate Research Fellowships

These provide an annual stipend of \$34,000 for the graduate student, and a cost-of-education allowance of \$12,000 to cover tuition and fees.



Limited to only one application submitted either in the 1st or 2nd year of graduate school. Students must be a US citizen, US national, or permanent resident. Check out the website for guidelines and deadlines (which are usually in October).

NIFA Predoctoral Fellowships

These provide an annual stipend of \$35,000, and a cost-of-education allowance of \$25,000 to the institution. Applicants must be a US citizen, US national, or permanent resident, and they must have



passed comprehensive exams. Check out <u>the website for guidelines and deadlines</u> (which are usually in October).

Mentor a high school or college student over the summer

- Young Scholars Program is a six-week summer internship for high school students, who work under the direction of graduate student or other lab personnel.
- Research and Extension Experiences for Undergraduates (REEU) is a similar program for college students interested in research careers.

Work-Life Resources

- Mental Health Initiative
- <u>Student Care and Outreach</u> helps coordinate care and assistance for all students who experience hardship or other unseen circumstances
- <u>The Graduate Student Emergency Fund</u> helps graduate students who experience an unexpected financial hardship
- <u>UGA Pride Center</u> helps foster an inclusive, informed community for LGBTQIA+ individuals through collaboration, education and advocacy
- <u>International Student Life</u> Assisting international students cope with life in the USA and helping internalize the campus

IPBGG Contacts

Administrative Manager



Business Support Leader



Graduate Coordinator



Director



The Master of Science (M.S.) Degree Program

A checklist for the following is provided on the PBGG website

Advisory Committee

Paperwork required: Fill in and turn in the <u>Advisory Committee</u> (G30) form by the 1st year

The Advisory Committee along with the major professor share responsibilities to monitor graduate student progress and guide the student toward timely completion of their degree program. The advisory committee is charged with framing and approving programs of study, advising students on required research skills, directing and approving the comprehensive examinations, guiding the design of thesis/dissertation research projects, reading and approving the final thesis document and approving the final oral examination (defense).\

An Advisory Committee consists of three or more faculty members needs to be in place by the end of the second semester of residence. This committee members must be selected by the student together with their major professor, and shall consist of the Major Professor, who must have Graduate Faculty status, and two other faculty members, at least one of whom must have Graduate Faculty status.

This committee will approve the student's program of study and thesis plan and administer the final oral examination. The student will keep the Advisory Committee informed of progress being made.

Program of Study

Paperwork required: Fill out the <u>Final Program of Study</u> (G138) form by end of the second week of classes of the semester of graduation.

M.S. students must have 30 credit hours to graduate, which must include 21 hours of course work, 12 hours of which must be graduate level courses only (i.e., not split undergraduate/ graduate courses, e.g., 4100/6100). No more than six hours of Research (PBGG 7000) or Thesis (PBGG 7300) will be counted as hours on your program of study. M.S. students may transfer 6 graduate course credits from another institution. Fill out the Request for Transfer Credit form (G134) to request transfer credit. The following courses are required for graduation:

- one credit of GradFIRST seminar (GRSC 7001) taken the first year
- one course of Research Seminar (PBGG/CRSS/HORT 8861)
- one course of Plant Breeding (PBGG/CRSS/HORT 6140)
- one course of Plant Breeding Practicum (PBGG/CRSS/HORT 6000)
- one Statistics course (STAT 6220 or STAT 6315 or FANR 6750 or higher)
- 3 hours of PBGG 7300 (thesis writing)

The final course selection is made by the student with the advice and consent of their Major Professor and their advisory committee. A <u>list of recommended electives</u> may be found on the IPBGG web site. The student will work with their Major Professor and Advisory Committee on the initial program of study by their first semester.

This Program of Study must be approved by the Advisory Committee and the Graduate Coordinator and is due to the Graduate School by the end of the second week of classes of the semester of graduation. However, students are strongly advised to have their Advisory Committee approve their coursework well before most of their courses are taken. Committees are under no

obligation to approve a program of study 'after the fact' and may require additional coursework if they are not consulted before the student has completed their coursework. The Administrative Manager will forward the Program of Study form to committee members and the Graduate School for approval.

All Graduate School requirements for a master's degree must be fulfilled within a six-year time frame, beginning with the first registration for graduate courses listed on the program of study and ending with the final semester of the sixth year.

Residency Requirement

Minimum residency requirement is one academic year (two consecutive semesters of full-time study).

Thesis Proposal

A thesis proposal approved by the Advisory Committee must be submitted to the Administrative Manager before the end of the first year (third semester) from enrollment. These items become a permanent part of the student's Institute file and record. The thesis proposal is to ensure that a student starts early on a research project suitable for a thesis. A draft plan of the proposed research will be formulated together with the student's Major Professor by the end of the first semester. The full proposal must be finalized and approved by the student's Advisory Committee by the end of the second semester at a scheduled committee meeting, with committee members present, either physically or digitally.

Committee members must receive a copy of the proposal at least 7 days prior to the scheduled meeting.

As a minimum, these research proposals should contain the research objectives and rationale, a proposed research approach, a research timeline, and a review of all the pertinent literature. The level of detail in the materials and methods section is at the discretion of the student and the committee members. Students are encouraged to prepare a slide presentation of their proposed research to present at their committee meeting.

Faculty are strongly encouraged to assign the research hours (PBGG 7000) a grade of "U" for students who do not have their proposal approved by the deadline. At the committee's discretion, a student may receive an additional semester to finalize the proposal before the student is assigned a "U."

Thesis

Paperwork required: Submit your dissertation for a preliminary ETD Format Check.

Paperwork required: Fill out the ETD Submission Approval form (G129) by the established deadline for the student's graduation semester for a first format check. Instructions for formatting the thesis or dissertation can be found here. Please do NOT create a brand-new ProQuest account when it is time to submit the final version of your thesis or dissertation. Simply log into your original ProQuest account, visit the document upload area, and replace the PDF that is there with the revised and final PDF. Proof-reading changes cannot be made to the document once it has been accepted as final. Please make sure that you are happy with the document you submit and do not submit until you are sure no additional edits to the content will be needed

Please submit an electronic copy of the thesis to the Advisory Committee at least two weeks prior to oral defense. Students should follow formatting guidelines based on the University of Georgia Graduate School Style Manual.

The thesis must demonstrate unity and purpose. All parts of the thesis must contribute to the stated objectives of the research. The methods used in the research must be described adequately to permit an independent investigator to replicate the work. The thesis will obtain final approval after suggested changes made by the advisory committee are completed.

The IPBGG permits two styles of theses:

- Traditional style: In addition to an introduction, literature review, and conclusion, this style may include materials and methods, results, discussion, literature cited, and figures tables as appropriate to the student's discipline. Documentation and format must be consistent throughout the dissertation.
- Manuscript style, which requires at least 1 publishable manuscript. The introduction, literature review, and concluding chapter or section will be presented separately from their briefer presentation in each manuscript to allow thoroughness not usually permitted by space limitations in peer-reviewed journals. Each manuscript must be prepared in the style of the appropriate scientific journal. Each manuscript must blend appropriately with the other parts of the thesis, except for the differences required by journals (e.g., literature citations, table designations. Captions must accompany each figure on the same or preceding page of each manuscript. No reprints or photocopies of reprints will be permitted. The names of all authors, in journal-submitted order, and the name of the journal (with volume, page numbers, and date, if published) must be given as a footnote to the title on the first page of each manuscript to indicate the current status of each manuscript. The student must be the first author of each manuscript in this style. The Graduate School must receive proof of permission to use articles that have been published or accepted for publication.

Time Limits

Master's degree students must complete all degree requirements, including all coursework on their approved program of study and defend their thesis within six years of matriculation.

A special request for an extension of time on the six-year expiration of may be made to the dean of the Graduate School. This request must include specific reasons that the student did not complete requirements in the time allotted by Graduate School policy. A petition of this type must include 1) a specific timeline for the completion of requirements, 2) an approved advisory committee form, if required for the degree, 3) an approved program of study and a letter of support from both the program graduate coordinator and the major professor.

Application for Graduation

Paperwork required: Fill out the Application for Graduation form, available on Athena. Due no later than Friday of the second full week (the first full week for summer) of classes in the semester that you plan to graduate.

Students must enroll for a minimum of three credit hours during the semester in which degree requirements are completed.

Late Filing for Graduation. A student who misses a graduation deadline by failing to file the Application for Graduation, Advisory Committee Form, and/or Program of Study Form will pay a single fee of \$50 (check or money order in U.S. dollars) for the late processing of all required forms. All required graduation forms, and the late fee payment must be submitted to the Graduate School Office of Enrolled Student Services within 45 calendar days of the original deadline. After

the 45-day late period, no students will be added to the commencement roster for the current semester.

Change in Graduation Date. If a student cannot complete degree requirements in the semester for which a graduation application was submitted, the student should notify the Graduate School (gradinfo@uga.edu) to cancel the application. Once the application has been cancelled, the student should reapply the following semester.

Exit Seminar

An oral defense of the student's thesis with their Major Professor and Advisory Committee must take place by the Graduate School deadline. The exit seminar should immediately precede the defense unless there are extenuating circumstances. Students should provide the title and appropriate photos to the IPBGG Program manager in time to prepare and send out seminar announcements.

Final Exam

Paperwork required: Fill out the <u>Approval Form for Master's Thesis and Final Oral Examination</u> (G140) prior to your examination. It will be routed to your committee members for their approval.

Paperwork required: Every committee member must fill out the <u>Student Performance Evaluation</u> <u>Form</u> found on Qualtrics. The Administrative Manager will provide the necessary password so that the student can share with their Advisory Committee prior to their exam.

A final examination on both the program of study and the thesis is required and will be administered by the Advisory Committee. Defense of the thesis will be by an oral examination. All members of the Advisory Committee must participate in the entire defense, and the committee must approve the defense with no more than one dissenting vote.

Exit Interview

Paperwork required: The Exit Interview Form is found on Qualtrics and needs to be filled out prior to meeting with the director. The Administrative Manager will provide students with a link. All feedback is anonymous.

An exit interview must be scheduled with the Institute director after the Exit Interview Form is completed, but prior to graduation.

M.S. transfer to Ph.D. Program

An M.S. student requesting to transfer to a Ph.D. program prior to completing all requirements for a M.S. degree must have finished 1 year of study during which they maintain a minimum GPA of 3.5 and demonstrate acceptable performance in research as determined by the student's Advisory Committee at a formal meeting.



The Doctor of Philosophy (Ph.D.) Degree Program

A checklist for the following is provided on the PBGG website

Advisory Committee

Paperwork required: Fill in and turn in the <u>Advisory Committee</u> (G30) form by end of the 1st year

The Advisory Committee along with the major professor share responsibilities to monitor graduate student progress and guide the student toward timely completion of their degree program. The advisory committee is charged with framing and approving programs of study, advising students on required research skills, directing and approving the comprehensive examinations, guiding the design of thesis/dissertation research projects, reading and approving the final dissertation document and approving the final oral examination (defense). The student will keep the Advisory Committee informed of progress being made.

An Advisory Committee of five or more faculty members needs to be in place by the end of the first year as a PBGG major. At least one committee member must be from outside the Institute. These committee members must be selected by the student together with their major professor. Persons employed by UGA who hold one of the following ranks may serve on doctoral committees: assistant professor, associate professor, professor, academic professional, senior academic professional, public service associate, senior public service associate, assistant research scientist, associate research scientist, and senior research scientist. including no more than one non-UGA faculty, who must hold the terminal degree in his/her field of study. More than 50% of the committee must be members of the Graduate Program Faculty. A faculty member may not serve as major professor or as a member of any committee that plans a program of study or evaluates the educational progress of a member of their immediate family.

Students with co-Major Professors must have five faculty members on their Advisory Committee, consisting of the two co-Major Professors and three other faculty members. At least one committee member must be from outside the Institute. No more than two co-major professors are allowed.

One person having no official relationship with UGA may serve as a voting member on the advisory committee of a graduate student after nomination by the graduate coordinator and approval of the dean of the Graduate School. When nominating a non-affiliated person, the graduate coordinator must submit the nominee's current resume/CV with an Advisory Committee form and a letter addressed to the dean of the Graduate School explaining why the services of the non-affiliated person are requested. A nominee must have a terminal degree in their field and distinguished academic credentials in the field of study. A non-affiliated person appointed to a graduate student's committee must attend meetings associated with the appointment. Compensation, if required, must be provided by the department that requested the appointment. A graduate student may not contribute to the compensation of a non-affiliated committee member.

Retired faculty may serve on committees, under the terms and conditions defined in the *Graduate Coordinator's Handbook*. Current copies are available from the Graduate School faculty resources web site.

Replacements for original members of the advisory committee must be approved by the dean of the Graduate School prior to their service in any capacity. A revised advisory committee form for showing the reconstituted committee must be submitted to the Graduate School via GradStatus.

Program of Study

Paperwork required: Fill out the <u>Preliminary Program of Study</u> form by the end of the 1st year and turn in to the IPBGG program Manager. The Program of Study must be approved by the Advisory Committee and the Graduate Coordinator.

Paperwork required: Fill out the <u>Final Program of Study</u> (G138) form when residency has been met & prior to comprehensive exam & application for admission to candidacy.

Ph.D. students must have 30 hours beyond the M.S. degree to graduate, which must include a minimum of 16 hours of 8000 or 9000 level courses and 3 hours of dissertation writing (9300). One hour of GradFirst seminar is required their first or second semester if they have not already had one during their MS degree.

For Ph.D. students who previously earned an MS degree

30 credit hours comprised of:

- 21 hours of coursework (a minimum of 16 hours of 8000-9000 level credits) excluding 9000/9005/9300
- 3 hours of dissertation writing (PBGG 9300)
- 6 hours of research (PBGG 9000) and the remainder in research or relevant lower level courses

The following courses are required for graduation:

- two credits of Graduate Seminar (PBGG/CRSS/HORT 8860 & PBGG/CRSS/HORT 8861)
- Advanced Plant Breeding (PBGG/CRSS/HORT 8140)
- Plant Breeding Practicum (PBGG/CRSS/HORT 6000)
- Plant Genetics (PBIO 8100 or PBGG 8890 or comparable). PBIO 8100 is recommended for students more interested in Genetics & Genomics, while PBGG 8890 is recommended for students planning careers in plant breeding.
- Statistics (PBGG 8010, PBIO(PATH) 8250 or STAT 8200 or comparable)

Ph.D. students may transfer 9 graduate course credits from another institution after beginning at UGA, as long as that course did not count towards another degree at the previous institution. Fill out the Request for Transfer Credit form (G134) to request transfer credit.

For Ph.D. students who do not have an MS degree:

36 credit hours comprised of:

- 27 hours of coursework (a minimum of 16 hours of 8000-9000 level credits), and including MS/PhD requirements
- 3 hours of dissertation writing (PBGG 9300)
- 6 hours (minimum) of research (PBGG 9000) and the remainder in research or relevant lower-level courses

The following courses are required for graduation:

 two credits of Graduate Seminar (PBGG/CRSS/HORT 8860 & PBGG/CRSS/HORT 8861)

- Plant Breeding (PBGG/CRSS/HORT 6140)
- Plant Breeding Practicum (PBGG/CRSS/HORT 6000)
- Advanced Plant Breeding (PBGG/CRSS/HORT 8140)
- Plant Genetics (PBIO 8100 or PBGG 8890 or comparable). PBIO 8100 is recommended for students more interested in Genetics & Genomics, while PBGG 8890 is recommended for students planning careers in plant breeding.
- Statistics (STAT 6315 or FANR 6750 or higher)
- Statistics (PBGG 8010, PBIO(PATH) 8250 or STAT 8200 or comparable)

Ph.D. students may transfer up to nine graduate course credits from another institution after beginning at UGA, as long as that course did not count towards another degree at the previous institution. Fill out the Request for Transfer Credit form (G134) to request transfer credit.

The final course selection is made by the student with the advice and consent of their major professor and their advisory committee. A <u>list of recommended electives</u> may be found on the IPBGG web site. The student will work with their Major Professor and Advisory Committee on the initial program of study by the second semester.

The Preliminary Program of Study should be approved by the Advisory Committee no later than the end of the 1st year, and well before most of their courses are taken. Committees are under no obligation to approve a program of study 'after fact,' and may require additional coursework if they are not consulted before the student has completed their coursework. This Program of Study must be approved by the Advisory Committee and the Graduate Coordinator. Any changes in courses in the Final Program of Study or committee make-up must be approved and on file with the Graduate School by the time the notification of the preliminary oral comprehensive examination is given and prior to admission to candidacy. All courses on the Program of Study must fall within a six-year time limit.

Research Prospectus

The dissertation must represent originality in research, independent thinking, scholarly ability, and technical mastery of a field of study. The Major Professor and Advisory Committee shall guide the student in dissertation planning. The student is required to prepare a dissertation prospectus which provides an introduction, rationale, and description of the proposed research to be conducted, along with a literature review of all the pertinent literature and a proposed research timeline. The level of detail in the materials and methods section is at the discretion of the student and the committee members. The prospectus must be presented to, and approved by, the Advisory Committee before significant research is undertaken, and no later than the end of the student's second year. Committee members must receive a copy of the proposal at least 14 days prior to the scheduled meeting, and all committee members must be present, either physically or digitally. Students are encouraged to prepare a slide presentation of their proposed research and pertinent background information to present at their committee meeting.

Approval of the dissertation prospectus signifies that the members of the Advisory Committee believe that it proposes a satisfactory research study. A copy of the approved prospectus must be emailed to the Administrative Manager and becomes a permanent part of their record.

Faculty are strongly encouraged to assign the research hours a grade of "U" for students who do not have their proposal approved by the deadline. At the committee's discretion, a student may receive an additional semester to finalize the proposal before the student is assigned a "U."

Residency Requirement

At least two consecutive semesters of full-time work must be spent in resident study on one of the three UGA campuses. The residency requirement for the Doctor of Philosophy degree is interpreted as 30 hours of consecutive graduate course work that is included on the approved program of study

Time Limits

Doctoral students must complete all course work on their approved program of study and be admitted to candidacy within six-years of matriculation. The six-year limit begins with the semester the student matriculated into the program and ends with the last semester before the beginning of the sixth year.

For doctoral students, the time limit to complete the dissertation and qualify for graduation is five years following admission to candidacy. After this time, the student's candidacy will be considered expired and the student must retake the comprehensive exams and be re-admitted to candidacy in order to defend the dissertation and qualify for graduation. If a doctoral student's candidacy expires after the first week of classes in the final semester of the fifth year, the student is granted the remainder of the semester to complete degree requirements without special permission of the dean of the Graduate School.

A special request for an extension of time on the six-year expiration of coursework or the five-year expiration of candidacy may be made to the dean of the Graduate School. This request must include specific reasons that the student did not complete requirements in the time allotted by Graduate School policy. A petition of this type must include 1) a specific timeline for the completion of requirements, 2) an approved advisory committee form, 3) an approved program of study, and a letter of support from both the program graduate coordinator and the Major Professor.

Comprehensive Examination

Paperwork required: Every committee member must fill out the <u>Student Performance Evaluation</u> <u>Form</u> found on Qualtrics. The Administrative Manager will provide the necessary password so that the student can share with their Advisory Committee prior to their exam.

The Graduate School requires that all Doctoral students pass a Written and Oral Comprehensive Examination before they are admitted to candidacy for the Doctoral degree. The Final Program of Study form must be submitted before taking the comprehensive exam. Students planning to take the Written Comprehensive Examination should meet with their Advisory Committee to discuss the examination. The final step before Admission to Candidacy is the Oral Comprehensive Examination, administered by the Advisory Committee. The written comprehensive examination is given after a student has completed the bulk of their course work. This should be taken before the start of the third year in residence in the doctoral program. The oral comprehensive examination should follow soon thereafter.

The Oral Comprehensive Examination may include, but is not limited to, the presentation, discussion, and defense of the dissertation prospectus. The Oral Comprehensive Examination should include an evaluation of the broad knowledge needed to complete the dissertation. The

Exam may also include topics directly related to the dissertation prospectus. To pass each examination, there can be no more than one 'no'vote. An abstention is not an appropriate vote for the comprehensive examination. The results of both examinations will be reported to the Graduate School within two weeks following the oral examination.

The student must notify the Administrative Manager four weeks prior to the oral exam, who will announce this to the Graduate School at least two weeks prior.

All members of the Advisory Committee must be physically present or have electronic means of meeting for the entire period of this Examination. Once the Oral Comprehensive Examination has been passed, the student will be admitted to candidacy for the Doctoral degree.

Repeat policy: Students who fail to pass either exam are allowed one additional chance to retake the exam, after which they will be dismissed from the program if they fail to pass the second attempt.

If the dissertation is not completed within 5 years of being admitted to candidacy, the student must pass another set of Written and Oral Comprehensive Examinations and be readmitted to candidacy.

Admission to Candidacy

Paperwork required: Fill out the <u>Application for Admission to Candidacy for Doctoral Degrees</u> (G162) after passing the oral comprehensive exam

Ph.D. students must have completed all prerequisites set as a condition for admission, filed a final Program of Study, met residence requirements, passed preliminary exams, and maintained a 3.0 average on courses listed on the plan of study.

A Ph.D. student must apply for admission to candidacy at least one full semester before the date of graduation. After admission to candidacy, a student must register for a combined minimum of 18 credit hours of dissertation or other appropriate graduate credit during the completion of the degree program. Students planning to graduate the same semester they enter candidacy must be admitted to candidacy by the published deadline for candidacy during that semester and register for 18 hours. The student must also meet all other deadlines for graduation in that semester. A student must register for a minimum of three hours of credit in any semester when using UGA facilities, and/or faculty or staff time.

Application for Graduation

Paperwork required: Fill out the Application for Graduation form, available on Athena. Due no later than Friday of the second full week (the first full week for summer) of classes in the semester that you plan to graduate.

A student must apply for graduation no later than Friday of the second full week (the first full week for summer) of classes in the semester of the anticipated graduation date to permit the Graduate School to review the student's file. These <u>deadlines</u> are published on the Graduate School Website for three semesters in advance. Students must enroll for a minimum of three credit hours during the semester in which degree requirements are completed. The application for graduation is submitted electronically in Athena and requires no signatures.

Late Filing for Graduation. A student who misses a graduation deadline by failing to file the Application for Graduation, Advisory Committee Form, and/or Program of Study Form will have the option of paying a single fee of \$50 (check or money order in U.S. dollars) for the late processing of all required forms. All required graduation forms, and the late fee payment must be

submitted to the Graduate School Office of Enrolled Student Services within 45 calendar days of the original deadline. After the 45-day late period, no students will be added to the commencement roster for the current semester.

Change in Graduation Date. If a student cannot complete degree requirements in the semester for which a graduation application was submitted, the student should notify the Graduate School (gradinfo@uga.edu) to cancel the application. Once the application has been cancelled, the student should reapply the following semester.

Dissertation Completion

Paperwork required: Submit your dissertation for a preliminary <u>ETD Format Check.</u>

Paperwork required: Fill out the <u>ETD Submission Approval</u> form (G129) by the established <u>deadline</u> for the student's graduation semester for a first format check. Instructions for formatting the thesis or dissertation can be found <u>here</u>. Please do NOT create a brand-new ProQuest account when it is time to submit the final version of your thesis or dissertation. Simply log into your original ProQuest account, visit the document upload area, and replace the PDF that is there with the revised and final PDF. Proof-reading changes cannot be made to the document once it has been accepted as final. Please make sure that you are happy with the document you submit and do not submit until you are sure no additional edits to the content will be needed.

The Graduate School will not accept a dissertation until the student has been admitted to candidacy for the degree, which starts as soon as the Graduate School is notified that the student passed their comprehensive exam. The year on the title page of the dissertation or thesis will be the same year in which the degree is conferred. The theses or dissertation will not be forwarded to the University Library until the degree has been conferred.

All requirements for the thesis or dissertation must be completed no later than two full weeks prior to graduation (see "Important Dates & Deadlines" on the Graduate School website). The final copy will not be accepted as the official copy until the Graduate School has received the signed approval form for the thesis or dissertation defense and the ETD submission approval form. These forms are due by the same deadline as the final copy of the thesis/dissertation.

In addition to the Graduate School deadlines, a final draft of the dissertation must be submitted to the Advisory Committee no later than three weeks before the final examination. This draft is one that is approved by the Major Professor as being complete and editorially correct. Students should follow formatting guidelines based on the University of Georgia Graduate School Style Manual.

The dissertation will be revised as required by the examining committee.

By the deadline listed for the graduation semester, a complete formatted copy of the dissertation must be submitted to the Graduate School for a first format check.

As per the Graduate School, a dissertation

- presents original research or scholarship
- demonstrates the student's ability to understand and critically evaluate the literature of the field
- reflects the student's mastery of appropriate research methods and tools
- shows that a student can address a major problem, arrive at successful conclusions, and report results in a literate fashion.

The Graduate School also states that "all parts of the dissertation or thesis must contribute to the stated objectives of the research. The methods used in the research must be described adequately to permit an independent investigator to replicate the work."

IPBGG permits two styles of dissertations:

- Traditional style: In addition to an introduction, literature review, and conclusion, this style may include materials and methods, results, discussion, literature cited, and figures tables as appropriate to the student's discipline. Documentation and format must be consistent throughout the dissertation.
- Manuscript style, which requires at least 2 publishable manuscripts. The introduction, literature review, and concluding chapter or section will be presented separately from their briefer presentation in each manuscript to allow thoroughness not usually permitted by space limitations in peer-reviewed journals. Each manuscript must be prepared in the style of the appropriate scientific journal. Each manuscript must blend appropriately with the other parts of the dissertation, except for the differences required by journals (e.g., literature citations, table designations. Captions must accompany each figure on the same or preceding page of each manuscript. No reprints or photocopies of reprints will be permitted. The names of all authors, in journal-submitted order, and the name of the journal (with volume, page numbers, and date, if published) must be given as a footnote to the title on the first page of each manuscript to indicate the current status of each manuscript. The student must be the first author of each manuscript in this style. The Graduate School must receive proof of permission to use articles that have been published or accepted for publication.

Exit Seminar/Oral Defense

Paperwork required: Fill out the <u>Approval Form for Doctoral Dissertation and Final Oral Examination</u> (G164) as soon as defense is scheduled.

Paperwork required: Every committee member must fill out the <u>Student Performance Evaluation</u> Form found on Qualtrics. The Administrative Manager will provide the necessary password so that the student can share with their Advisory Committee prior to their exam.

The final examination will consist of a seminar presentation of the student's research, followed by the defense/final exam. Questioning in the defense will emphasize the topic of the thesis or dissertation, but questions may be raised in any appropriate area.

The student and committee chair must appear in person for both components of the defense, but other committee members can participate via teleconference or video conference, provided that the comments of all participants can clearly and consistently be heard. If the major professor is not able to attend the defense in person, they can designate a substitute chair who is a current member of the committee. Under extenuating circumstances with approval by the Institute Director and Graduate Coordinator, a defense can be held completely remotely.

All IPBGG student, staff, postdoc, and faculty members are invited and encouraged to attend the exit seminar. The Administrative Manager will notify the Institute members of the time and place of the final seminar and exam. An oral defense of the student's dissertation with the Major Professor and Advisory Committee must take place by the Graduate School deadline.

To pass, there can be no more than one 'no' vote, and the major professor (and co-major professor if any) must vote to pass. Abstentions are not permitted.

**It is the student's responsibility to abide by Graduate School deadlines for graduation. Please check the <u>Graduate School</u> website under Current Students, Important Deadlines and Dates.

Exit Interview

Paperwork required: The Exit Interview Form is found on Qualtrics and needs to be filled out prior to meeting with the director. The Administrative Manager will provide students with a link. All feedback is anonymous.

An exit interview must be scheduled with the Institute director after the Exit Interview Form is completed, but prior to graduation.

Commencement

Paperwork required: Fill out the <u>Doctoral Commencement Information</u> (G120) form if you will participate in the commencement ceremony.

