# PLANT BREEDING GRADUATE PROGRAM (PBGP) COURSES FOR FALL 2024

This document lists the core and elective courses offered in Fall 2024 (as of August 12, 2024) and important registration details.

- **Graduate Catalog:** All plant breeding courses, including required (core) and elective courses, are listed in the Graduate Catalog.
- **Course Updates**: Students are advised to check ONE.UF for any updates to the course information mentioned here.
- **Elective Courses**: The list of elective courses provided here is not exhaustive. Students may choose additional electives with approval from their supervisory committee.
- **Registration for Courses Outside of Department**: Eliana does not register students for courses offered by other departments. Students are responsible for registering themselves in any courses outside of Horticultural Sciences, Plant Breeding, and PMCB.
- **Departmentally Controlled Courses**: Many graduate courses are departmentally controlled and may require registration permission from the instructor(s).
    - For these courses, students should request enrollment by contacting either the professor/instructor offering the course and/or the registration staff in that department to register. See the end of this document for a **List of Department Registration Contacts.**
    - REC Students: You must contact the registration liaison in the department offering the class to ensure you will be indeed placed in the 'off-campus/REC' section.

## CORE COURSES

### AGR 5266C Field Plot Techniques

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| Instructor: | Esteban Rios estebanrios@ufl.edu |
| Synopsis: | Techniques and procedures used in the design and analysis of field plots, greenhouse, and laboratory research experiments. Application of research methodology, the analysis, and interpretation of research results. |
| Prerequisite: | STA 3023 |
| Details: | 3 credits, offered by Agronomy, hybrid (in-class and via Zoom) option available |
| Registration: | Complete and submit the Agronomy registration Qualtrics form at https://ufl.qualtrics.com/jfe/form/SV_8kPXSKxdX1zR5ae. Please allow at least 48 business hours for processing. For any issues, contact Lorraine White whitelm@ufl.edu in Agronomy. |

### STA 6093 Introduction to Applied Statistics for Agricultural and Life Sciences

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| Instructors: | Denis Valle drvalle@ufl.edu, Ben Baiser bbaiser@ufl.edu |
| Synopsis: | Provides students with a conceptual and practical understanding of the application of statistics in the agricultural and life sciences. A combination of lectures, programming demonstrations, data exercises using the programming language R, group activities, and primary literature will be used. |
| Details: | 3 credits, offered by Agricultural & Life Sciences-General, online |
| Registration: | **Gainesville/On-campus students** self-register using Class # 16304 (this is ONLY for students who are located in Gainesville)<br>**REC/Off-campus students** register with Dianna Behringer by sending an email to ffgs-academics@ifas.ufl.edu OR Malissa Redden in CALS at mredden@ufl.edu. |

**PCB6555 Introduction to Quantitative Genetics**

Instructors: Marcio Resende mresende@ufl.edu, Matias Kirst mkirst@ufl.edu, Luis Ferrão lferrao@ufl.edu

Synopsis: Intended for students of all disciplines who are interested in genetic principles and biometric evaluation of characters that exhibit continuous variation in natural populations or breeding programs.

Prerequisite: STA 6166

Details: 3 credits, offered by Forest Resources and Conservation (FFGS), hybrid

Registration: To register, send an email to ffgs-academics@ifas.ufl.edu and include your UFID and location (REC or Gainesville) in the message. Students must have taken STA 6166 (prerequisite) to attend the class. However, if you have taken any other graduate-level statistics course(s), you may have this requirement waived.

**To request a prerequisite waiver:** email Dr. Resende at mresende@ufl.edu for approval, specifying the statistics course(s) you have taken. If the course(s) was taken outside UF, attach the syllabus to facilitate Dr. Resende's assessment. If Dr. Resende approves the waiver, send the authorization to the email above to request registration. For further questions, contact Dr. Resende directly.

**HOS 6932 Journal Colloquium – Professional Development for Plant Breeders**

Instructor: Team taught, coord. Patricio Munoz p.munoz@ufl.edu

Synopsis: The objective of the course is to expose plant breeding students to many different career paths in academia, industry, government (USDA), and non-profit organizations. Students will make informed decisions about their careers and research projects to maximize their chances of obtaining a job in their chosen field of study.

Details: 1 credit, offered by Horticultural Sciences, hybrid

Registration: Request registration with Eliana Kampf elianak@ufl.edu or Curtis Smyder curtisr@ufl.edu

## FALL 2024 JOURNAL COLLOQUIUM TOPICS offered by PBGP Faculty

**AGR 6932 Phenomic Selection: Another Tool for the Plant Breeder Toolbox**

Instructors: Márcio Resende mresende@ufl.edu, Esteban Rios estebanrios@ufl.edu, and TAs Pablo Sipowicz pablosipowicz@ufl.edu and Rafaela Graciano rafaela.graciano@ufl.edu

Details: 1 credit, offered by Agronomy

Period: Wednesdays, period 7 (1:55-2:45 pm)

Location: Blueberry Building classroom

Registration: Complete and submit the Agronomy registration Qualtrics form at https://ufl.qualtrics.com/jfe/form/SV_8kPXSKxdX1zR5ae. Please allow at least 48 business hours for processing. For any issues, contact Lorraine White whitelm@ufl.edu in Agronomy.

**HOS 6932 Ethics in Plant Science**

Instructors: Charlie Messina cmessina@ufl.edu, and TAs Makayla Rutski makaylarutski@ufl.edu and Noé Perron noeperron@ufl.edu

Details: 1 credit, offered by PBGP/HOS

Period: Wednesdays, period 9 (4:05-4:55 pm)

Location: 1306 and 1308 Fifield

Registration: Request registration with Eliana Kampf elianak@ufl.edu

## ELECTIVE COURSES

The list of elective courses below is not exhaustive. Students may choose additional electives with approval from their advisor and supervisory committee.

**AGR 6322 Advanced Plant Breeding**

Instructor: Esteban Rios estebanrios@ufl.edu
Synopsis: Theory and use of biometrical genetic models for analytical evaluation of qualitative and quantitative characteristics, with procedures applicable to various types of plant species.
Prerequisites: AGR 3303, 4231, AGR 6311, and STA 6167
Details: 3 credits, offered by Agronomy, hybrid
Registration: Complete and submit the Agronomy registration Qualtrics form at https://ufl.qualtrics.com/jfe/form/SV_8kPXSKxdX1zR5ae. Please allow at least 48 business hours for processing. For any issues, contact Lorraine White whitelm@ufl.edu in Agronomy.

**ENY 5006 Graduate Survey of Entomology**

Instructors: Rebecca Baldwin baldwinr@ufl.edu, Christine Miller cwmiller@ufl.edu, Anthony Auletta anthonyauletta@ufl.edu
Synopsis: Insect structure, function, development, classification, ecological niches, and control of those harmful to plants and animals.
Details: 2 credits, offered by Entomology and Nematology, hybrid
Registration: Request registration with Elena Alyanaya ealyanaya@ufl.edu

**ENY 5006L Graduate Survey of Entomology Laboratory**

Instructors: James Boothroyd james.boothroyd@ufl.edu, Anthony Auletta anthonyauletta@ufl.edu, Rebecca Baldwin baldwinr@ufl.edu
Synopsis: Practical experience working with insects, using laboratory equipment, dissecting insects, and preparing laboratory reports. Collection required.
Co-Requisite: ENY 5006.
Details: 1 credit, offered by Entomology and Nematology, hybrid
Registration: Request registration with Elena Alyanaya ealyanaya@ufl.edu

**HOS6932 Special Topics: Horticultural Physiology**

Instructor: Gerardo Nunez
Synopsis: Study of contemporary research in horticultural science.
Details: 3 credits, offered by Horticultural Sciences, online
Registration: Request registration with Curtis Smyder curtisr@ufl.edu

**PCB 5065 Advanced Genetics**

Instructor(s): Dean Gabriel (coord.), L. Curt Hannah, M. Kirst, M. Resende, D. McCarty
Synopsis: Examines genetic principles including gene and gene function; recombination and linkage; molecular markers, multipoint linkage analysis, and positional cloning; and quantitative, population, developmental, and non-Mendelian genetics. For graduate students in any life science discipline.
Prerequisite: AGR 3303 or PCB 3063 and BCH 4024 or BCH 5045
Details: 4 credits, offered by Horticultural Sciences, hybrid
Registration: Request registration with Emily McFalls emurphy1@ufl.edu

**PCB 5530 Plant Molecular Biology and Genomics**

Instructors: G. Peter (coord.), J. Kim, A. Hanson
Synopsis: Integrated overview of the fundamental mechanisms enabling plant growth, development, and function, and approaches to study these at molecular level. Topics include replication, repair,

transcription, translation, cell cycle, transformation, gene tagging, structural genomics, proteomics, and metabolomics.
Details: 3 credits, offered by Forest Resources and Conservation (FFGS), hybrid
Registration: Complete the form at ffgs-academics@ifas.ufl.edu

**PLP 5005C General Plant Pathology**
Instructor: Staff/Brantlee Richter
Synopsis: Microorganisms and environmental factors that cause disease in plants. Symptoms and losses caused by plant diseases. Principles of plant disease development, diagnosis, and control. Genetics and epidemiology of plant diseases.
Prerequisite: Course in biology or botany.
Details: 4 credits, offered by Plant Pathology
Registration: Request registration with Jessica Ulloa julloa@ufl.edu

**NOTE:** To plan **STATISTICAL COURSES**, use the webpage https://ufstatscourses.shinyapps.io/shiny_tutorial/ which is an up-to-date list of the different stats courses at UF as compiled by Dr. Denis Valle. Many courses in the catalog are simply not offered or are offered irregularly, and different departments and colleges offer multiple stats courses.

## PARTIAL LIST OF STAFF TO CONTACT FOR REGISTRATION IN OTHER UF DEPARTMENTS:

**AGRONOMY**
Lorraine White
Email: whitelm@ufl.edu
To request enrollment in Agronomy courses, complete the registration form by submitting the requested information at https://ufl.qualtrics.com/jfe/form/SV_8kPXSKxdX1zR5ae.

**AGRICULTURAL AND BIOLOGICAL ENGINEERING**
Daphane Flournoy, dflournoy@ufl.edu

**AGRICULTURE COMMUNICATION AND EDUCATION**
Becky Cook, rtrammell@ufl.edu

**ENTOMOLOGY AND NEMATOLOGY**
Elena Alyanaya, ealyanaya@ufl.edu
Feenix Hartell, fhartell@ufl.edu

**ENVIRONMENTAL HORTICULTURE**
Mallory Buchyn, mbuchyn@ufl.edu

**FOREST, FISHERIES AND GEOMATIC SCIENCES (FFGS)**
Email ffgs-academics@ifas.ufl.edu and include your UFID and location (REC or Gainesville) in the message.
Amy Abernethy, aabner@ufl.edu

**HORTICULTURAL SCIENCES (HOS)**
Eliana Kampf-Plant Breeding (I can register you for any HOS, PB, or PMCB course), elianak@ufl.edu
Curtis Smyder-Horticultural Sciences, curtisr@ufl.edu
Emily McFalls-PMCB, emurphy1@ufl.edu

**PLANT PATHOLOGY**
Jessica Ulloa, julloa@ufl.edu

**SOIL, WATER, AND ECOSYSTEM SCIENCES**
Mike Sisk, mjsisk@ufl.edu