COURSE REQUIREMENTS FOR THE PLANT SCIENCES MAJOR
FOR STUDENTS ENTERING PROGRAM IN FALL 2015 OR LATER

Beginning in the Fall 2015 term, Plant Sciences majors must complete coursework for the college and program that includes approximately two years of “core” or foundational coursework, plus a concentration, ePortfolio and experiential learning experience. Core coursework in biology, chemistry, statistics and plant biology should be completed as early as possible.

Course abbreviations and numbers are shown below in red.

PLANT SCIENCES STUDENT SEMINARS (4 credits):
1. PLSCI 1110: Collaboration, Leadership and Career Skills in the Plant Sciences (2 credits, fall)
   This leadership seminar is required of all new PS students, including transfers.
2. PLSCI 4925*: SIPS Undergraduate Seminar Series (1 credit, fall, spring)
   PS students must take this course at least once, but they are encouraged to take it every semester.
3. PLSCI 4950*: Senior Seminar in Plant Sciences (1 credit, spring)
   This course is required of all graduating PS students, including those who graduate early or in January/August.

INTRODUCTORY BIOLOGY (6 credits):
AP Biology credit: score of 4-5 or BIOG 1140: Foundations of Biology (4 credits, fall)
N.B. The CALS registrar must accept the AP Biology score for credit in order for students to place out of BIOG 1140.
BIOG 1500: Investigative Biology Laboratory (2 credits, fall, spring, summer)

GENERAL CHEMISTRY (7-8 credits):
PS majors must take one semester of introductory chemistry and one semester of organic chemistry in one of the following sequences:
1. AP Chemistry credit: score of 5 (4 credits) + CHEM 1570: Introduction to Organic and Biological Chemistry (3 credits, spring, summer) or CHEM 3570: Organic Chemistry for the Life Sciences (3 credits, fall, summer)
2. CHEM 1560: Introduction to General Chemistry (4 credits, fall, summer) + PLBIO 1560: Application of CHEM 1560 to Plant Sciences (1 credit, fall) + CHEM 1570: Introduction to Organic and Biological Chemistry (3 credits, spring, summer)
3. CHEM 2070: General Chemistry (4 credits, fall, summer) + PLBIO 2070: Application of CHEM 2070 to Plant Sciences (1 credit, fall) + CHEM 1570: Introduction to Organic and Biological Chemistry (3 credits, spring, summer) or CHEM 3530: Principles of Organic Chemistry (3 credits, fall) or CHEM 3570: Organic Chemistry for the Life Sciences (3 credits, fall, summer)
N.B. The PS major requires only two semesters of chemistry: one of general chemistry (with a lab) and one of organic chemistry. If you elect to take upper-level organic chemistry (CHEM 3530 or 3570), you need a second semester of general chemistry, CHEM 2080, as a prerequisite for both of those courses.

CORE COURSEWORK (29 credits):
PS majors must take all of the courses listed below:
1. PLBIO 2410: Introductory Plant Biodiversity and Evolution (3 credits, fall)
2. PLBIO 0000*: Plant Evolutionary Biology (3 credits, spring)
3. PLBIO 2430: Taxonomy of Cultivated Plants (4 credits, fall, even years) or PLBIO 2480: Vascular Plant Systematics (4 credits, spring, even years)
4. PLBIO 3420 + 3421: Plant Physiology lectures and laboratory (5 credits, spring)
5. PLBRG 2250: Plant Genetics (4 credits, spring) or BIOMG 2800: Genetics and Genomics lectures (4 credits, fall, spring, summer)
   PLBRG 3250: Plant Genomics Approaches (1 credit, spring) is required in several concentrations and is strongly recommended for graduate-school bound students. Students who opt for the BIOMG course are strongly encouraged to take the lab component, BIOMG 2801.
6. PLHRT 0000*: Plant Science: From Foundation to Application (3 credits, spring)
7. PLPPM 0000*: Plant Interactive Biology (3 credits, fall)
8. PLSCS 2600: Soil Science (4 credits, fall)

**STATISTICS (4 credits):**
PS majors must take a course in introductory statistics from the list below. Other statistics courses must be approved by petition of the PSCC.
AP Statistics credit: score of 4 or 5 (4 credits) may be used to satisfy the introductory statistics course requirement.
BTRY 3010/NTRES 3130/STSCI 2200: Biological Statistics I (4 credits, fall). Prereq: one semester of calculus.
STSCI 2150: Introductory Statistics for Biology (4 credits, fall, spring)

**EXPERIENTIAL COURSEWORK (1 credit minimum):**
PS students must complete at least one credit in the courses above to satisfy the experiential learning requirement in the program.

**ePORTFOLIO:**
PS students will create an ePortfolio to track and highlight their learning in the program. PS students are expected to update the ePortfolio every semester they are enrolled in courses and present it to the SIPS community at least once before graduation.

**CONCENTRATION COURSEWORK (variable credit):**
PS students must declare one of the concentrations below by the end of the first semester of their junior year.

1. Ecology of Managed Landscapes (EML)
2. Plant Breeding & Genetics (PBG)
3. Plant Computational Biology (PCB)
4. Plant Evolution and Systematics (PES)
5. Plant Molecular, Cellular & Developmental Biology (PMCDB)
6. Plant Pathology & Plant-Microbe Biology (PPPMB)
7. Plants and Human Health (PHH)
8. Sustainable Plant Production (SPP)
9. Design Your Own Concentration (DYOC)

* Courses marked with an asterisk are pending approval of the CALS Curriculum Committee.