

## **Plant Stress Biology Program Area Summary of the PhD Degree Requirements**

To satisfy the course requirements for a doctoral degree, a student must complete:

- ◆ A minimum of 72 credit hours from courses numbered 7000-9000 (this includes dissertation research credit hours - i.e. Plnt S 9090).
- ◆ 15 credit hours (towards the 72 hour requirement) must be from courses numbered at the 8000 or 9000 level, exclusive of dissertation research, problems or independent study.

The core requirements for the PhD degree in the Plant Stress Biology program are:

- ◆ Two Entry Level courses (to be completed in the first year).  
Choose one course from:  
**Plnt S 7315** Crop Physiology (3 credits)  
**Plnt S 7320** Plant Physiology (3 credits)  
Choose one course from:  
**Plnt S 7500** Biology and Pathogenesis of Plant-Associated Microbes (lab course; 4 credits)  
**Plnt S 8505** Introduction to Plant Stress Biology (2 credits)
- ◆ **Plnt S 8010** Professionalism and Ethics (2 credits)
- ◆ **Plnt S 8530** Research with Plant Stress Agents (3 credits)
- ◆ Participation in the student seminar series  
**Plnt S 9087** (2 credits - Must enroll twice; only 1 credit counts towards the 15 credit hour requirement of 8000/9000 level courses)  
**Plnt S 7087** (3 credits - Must enroll 3 times)
- ◆ **Plnt S 9090** Dissertation Research (1 - 10 credits per semester)
- ◆ Participation in one of two readings courses each year:  
**Plnt S 7965** Readings in Plant Stress Biology  
**Plnt S 7970** Readings in Molecular Ecology of Herbivory
- ◆ Elective Courses to fulfill the requirement for 15 credit hours at the 8000 or 9000 level. Selections include:  
  
**Bio S 8300** Advanced Plant Genetics (3 credits)  
**Bio S/Plnt S 8310** Fungal Genetics and Biology (3 credits)  
**Plnt S 8330** Molecular Breeding (3 credits)  
**Plnt S 8362** Introduction to Plant Metabolism (2 credits)  
**Plnt S 8365** Introduction to Molecular Cell Biology (2 credits)  
**Forest 8620** Plant-Water Relations (3 credits)  
**Plnt S 8650** Ecological and Evolutionary Genomics (2 credits)  
**Plnt S 9415** Advanced Plant Physiology (1-3 credits)  
**Plnt S 9420** Transport and Metabolism of Plant Nutrients (3 credits)  
**Plnt S 9440** Applied Quantitative and Statistical Genetics (3 credits)  
**Plnt S 9540** Genetics of the Plant-Microbe Interaction (3 credits)

**Plnt S 9810** Insect Ecology (3 credits)

- ◆ Additional Entry Level courses:
  - Forest 7340** Tree Physiology
  - Plnt S 7400** Plant Anatomy
  - Bio S 3210** Plant Systematics

During the Fall and Winter semesters, PhD students who have not completed their comprehensive exam must enroll for 9 credits to be considered a full time student.

Teaching Requirement: Students must complete a graduate teaching experience for one semester or participate in an extension program approved by the Director of Graduate Studies. Students can fulfill the teaching experience by assisting in courses outside of the DPS as well as in undergraduate and graduate level DPS courses. For more information see "[Student Plan for Teaching Experience](#)."

Students with a strong interest in teaching may be interested in pursuing a minor in College Teaching. Details for this program can be found at:

<http://gradschool.missouri.edu/programs/minor-college-teaching/degree-requirements/>

For a more detailed explanation of degree requirements, see the [Graduate Student Handbook](#).