

Plant Science, M.S.

DEPARTMENT

Department of Plant Science

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MS in Plant Science, M.S.
MN in Plant Science, Minor
BS in Plant Science, B.S.
Courses Offered

The Department of Plant Science at California State University, Fresno is located in the nation's most productive agricultural valley. Our graduates acquire a sound academic background that is deeply rooted in field-based experience in the broad array of disciplines within Plant Science. These include pomology, olericulture, agronomy, environmental horticulture, soils, irrigation, economic entomology, plant pathology, weed science, and mechanized agriculture. Our faculty hold advanced degrees in these disciplines, and regularly integrate this knowledge directly in the field and laboratories. The university's 1000 acre agricultural field laboratory, greenhouse facilities, and the Jordan Agricultural Research Center are home to cutting-edge horticultural and agronomic practices, using the latest innovations in crop production, mechanization, irrigation, soil fertility, propagation, and pest management.

Completion of a degree in Plant Science at California State University, Fresno is your gateway to a career in agriculture. Our program is also designed to provide the academic background for certification/licensing as an Irrigation Specialist, Certified Irrigation Designer, Certified Arborist, California Certified Nursery Professional, Certified Crop Adviser (CCA), Certified Professional Agronomist, Certified Entomologist, CA Department of Pesticide Regulation Certification (Agricultural Pest Control Advisor and Qualified Applicator), Certified Horticulturist, or for advanced studies in Plant Sciences. Our graduates are sought after by many of the world's leading agricultural industries and agencies and many have entered leading graduate (MS, Ph.D.) programs worldwide.

REQUIREMENTS

Master of Science Degree Requirements

The Master of Science (M.S.) in Plant Science is a 30-unit program designed to provide advanced studies and in-depth knowledge in the fundamentals of plant science, as well as experimental design, technical writing, and formal presentation of research. Coursework provides a broad understanding of crop production and physiology, and thesis research allows for specialization. Areas of specialization include agronomy, pomology, horticulture, weed science, entomology, plant pathology, soils and irrigation, and mechanized agriculture. Graduate courses are offered in the late afternoon or evening permitting students to earn a degree within two or three years when working closely with an adviser.

Admission Requirements. The master's degree in Plant Science assumes preparation equivalent to a Bachelor of Science in Plant Science. Students having undergraduate majors in fields other than plant science may enter the program, but may reasonably expect additional requirements to produce equivalent preparation. The following courses or equivalents are expected to be completed prior to admission to the master's program:

3 units - Plant Physiology

3 units - Statistics

3 units - Soils

3 units - Plant Health (entomology, pathology, nematology, integrated pest management, biological control, etc.)

6 units - Life Science (chemistry, physics, etc.) of which a minimum of 3 units must be in chemistry

9 units - Natural Science (biology, ecology, genetics, agricultural sciences, etc.)

Students who do not have all the prerequisite courses may be admitted to the program with conditionally classified standing and would be expected to complete the prerequisites before being granted classified standing.

To apply, students must complete the online application required for university admission at <http://www.fresnostate.edu/gradstudies/admission>. The following materials are required to complete the application:

- one complete set of transcripts of all prior college or university work
- statement of research interest (minimum of 500 words)
- three letters of recommendation from individuals in a position to make an evaluation in support of graduate study
- Institutional Score Report of the Graduate Record Exam (GRE)
- Institutional Score Report of the Teaching of English as a Foreign Language (TOEFL) exam -- for applicants whose native language is not English (unless the baccalaureate degree is from an institution using English as their language of instruction)

The packet of application materials must be submitted by the following deadlines:

Spring Semester: **September 30** (Aug. 30, International students)*

Fall Semester: **March 1** (February 1, International students)*

*or as reported at Graduate Studies.

Admission will be based on all of the following criteria:

1. Official GRE scores (suggested minimum of 480 verbal, 580 quantitative and 4.0 grade point average for the last 60 units (minimum 2.75 GPA)
2. Grade point average (GPA) for the last 60 units (minimum 2.75)
3. TOEFL score: for those required to take this exam, scores of 213 (computer-based), 550 (paper-based), or 80 (Internet-based)
4. Official college transcript verifying completion of prerequisite courses and conferral of the bachelor's degree
5. Three letters of reference
6. Statement of research interest

Classified standing may be granted to students who meet all of the admission criteria.

Conditional classified standing may be granted to applicants meeting most, but not all, of the admission requirements. In this case, students must fulfill the criteria for "classified standing" and submit the required paperwork by the semester in which a minimum of 10 units to be used toward the degree are completed. Prerequisite courses are not included in the 30-unit master's program and students must achieve a 3.0 GPA for all coursework (prerequisite and graduate)

Program Requirements

All students must complete a 15-unit common core consisting of four 3-unit courses and three 1-unit topic seminars. Students must also complete 9 additional units of elective courses. Each student is also expected to complete 6 units of thesis research (PLANT 299) in consultation with a thesis committee.

Core (15 units)

AGRI 200, 201, 220; PLANT 257, 270 (3 units required)

Electives (9 units)

Three courses from the list below. With prior approval, one course from the list of approved, non-departmental electives can substitute.

PLANT 251, 261, 252, 255, PLANT 250T (Topics in Plant Science)

Thesis Research (6 units)

PLANT 299 (3 units in each of two semesters)

Total minimum requirements (30 units) *

* Under certain circumstances students may need to take additional units at the discretion of the thesis adviser.

Graduate Advising Notes

1. Non-departmental elective courses may have prerequisites other than those listed as admission requirements.

2. Upon acceptance to the M.S. program in Plant Science, students should obtain the Graduate Student Handbook from the department office (559. 278.2861). Students will be assigned an initial faculty adviser by the graduate coordinators. Soon after, students should identify a research interest and find a faculty member willing to serve as their thesis adviser, notifying the graduate coordinators once finalized.
3. To progress through the graduate program, the student must (a) complete all prerequisite coursework, (b) attain classified standing, (c) maintain a minimum GPA of 3.0, (d) meet the university graduate writing requirement, (e) successfully present and defend the thesis proposal, (f) file for advancement to candidacy, (g) file a thesis committee assignment form, (h) complete all program requirements, and (i) satisfactorily present and defend the thesis research results.
4. Advancement to candidacy requires the completion of 9 program units in residence with a 3.0 or higher GPA, meeting the university graduate writing requirement, and filing a Petition for Advancement to Candidacy a minimum of one semester prior to enrollment in thesis units (PLANT 299) and within the deadline.
5. To meet the university graduate writing competency requirement, students must either pass the writing component of AGRI 220, or be approved for writing competency by the graduate coordinators based on their review of the thesis proposal. See the Plant Science Department "Graduate Student Handbook" or the graduate coordinators for details.
6. All students must successfully present and defend their thesis research proposal. The defense must be completed by the end of their second semester in the M.S. program. Information on writing and defending the thesis can be obtained from the graduate coordinators.
7. See the Division of Graduate Studies section in this catalog for university requirements or visit www.fresnostate.edu/gradstudies.

FACULTY

The faculty members hold advanced degrees in their fields of specialization from leading agricultural institutions and universities in the United States. They are well-qualified teachers who, through extensive research and interaction with major agricultural industries, bring a wealth of basic and practical information into the classroom. A faculty academic adviser is assigned to work with each student to plan and design an individualized program of study to meet the student's educational and career objectives.

Many of the faculty members are involved in one or more of the Centers of the California Agricultural Technology Institute (Center for Irrigation Technology and the Viticulture and Enology Research Center) and the San Joaquin Experimental Range. These centers offer excellent opportunities to undergraduate and graduate students to participate in applied research projects that address and help solve problems faced by California's agricultural industry.

For faculty phone numbers and e-mail, see the campus directory.

For more on the faculty, see the faculty pages.

The faculty pages are updated by the department or program.