

site 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.

#### Units

**Core** ..... 15  
AGRI 200, 201, 220; PLANT 257, 270  
(3 units required)

**Electives** ..... 9  
Three courses from the list below.  
With prior approval, one course  
from the list of approved, non-departmental electives can substitute.  
PLANT 253, 261, 252, 255,  
PLANT 250T (Topics in Plant  
Science)

**Thesis Research** ..... 6  
PLANT 299 (3 units in each  
of two semesters)

**Total minimum requirements** ..... 30\*

\*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.csufresno.edu/gradstudies/](http://www.csufresno.edu/gradstudies/).

### COURSES

**Note:** Active immunization against tetanus (available through Student Health Services) is a prerequisite for registration in any laboratory course in agriculture and for any student employment within the University Agricultural Laboratory.

**Note:** Cost to the student of extended field trips varies each semester depending upon itinerary. The student should ask the course instructor.

### Crop Science — Agronomy and Vegetable Crops (CRSC)

**CRSC 1. Introduction to Crop Science (3)**  
Not open to students with credit in upper-division CRSC courses. Principles of production for cereal, row, forage and vegetable crops. Culture, insect and disease control, harvesting, storage, and marketing. S

**CRSC 101. Row Crops (3)**  
Prerequisites: BIOL 10 or 11, CRSC 1. The culture of beans, cotton, sugar beets, and oil crops; varieties, nutrition, insect, disease,

and weed control; harvest, storage, uses, and marketing. (2 lecture, 3 lab hours) F

**CRSC 102. Cereal and Forage Crops (3)**  
Prerequisites: BIOL 10 or 11, CRSC 1. The culture of alfalfa, barley, corn, sorghum, oats, rice, rye and wheat; varieties, nutrition, insect disease, and weed control; harvest, storage, uses, and marketing. (2 lecture, 3 lab hours) S

**CRSC 105. Range Ecology and Management (3)**

Prerequisites: BIOL 10 or 11, CRSC 1. Identification of range and pasture plants; carrying capacity; methods of range and pasture improvement, grazing management, water development, rodents, fertilization, reseeding, brush removal; mountain range resources. (2 lecture, 3 lab hours) S

**CRSC 111. Warm Season Vegetables (3)**  
Prerequisites: BIOL 10 or 11, CRSC 1. Cultural practices, harvesting, processing, and marketing of warm season vegetables of economic importance to California and the San Joaquin Valley. (2 lecture, 3 lab hours) (2-3 day field trip fee, \$65) F even

**CRSC 112. Cool Season Vegetables (3)**  
Prerequisites: BIOL 10 or 11, CRSC 1. Cultural practices, harvesting, processing, and marketing of cool season vegetables of economic importance to California and the San Joaquin Valley. (2 lecture, 3 lab hours) (2-3 day field trip fee, \$65) F odd

### Horticulture (HORT)

**HORT 1. Introduction to Fruit Science (3)**

Not open to students with credit in upper-division HORT courses. Origin and distribution of grape and tree fruit crops. Botanical and commercial classification of grapes and tree fruits and their culture in California. F (Formerly VTF 1)

**HORT 110. Fruit Species of California (3)**

Prerequisite: BIOL 10 or 11 or HORT 1 or OH 1. Fruit and nut species common to California, their adaptation and uses. S (Formerly VTF 110)

**HORT 112. Principles of Pomology II (3)**

Prerequisite: BIOL 10 or 11 or HORT 1. Pruning, fruit and vegetative development, pollination, rootstocks, propagation, and nutrition. Crop fundamentals of spring cultural practices. (2 lecture, 3 lab hours) F (Formerly VTF 112)