

AGRICULTURE

Master of Science in Agriculture

Plant Science Subplan

In the Department of Horticulture, Plant and Soil Science
www.csupomona.edu/~horpss

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The Plant Science Subplan in the Master of Science in Agriculture allows students to develop knowledge and competence in a specialized area of agricultural biology, agronomy, horticulture or soil science through individualized study and research. The program is designed to build upon a strong background in the physical, natural and agricultural sciences. Graduate students may concentrate on enhancing their skills in research methodology and design and statistical analysis, or they may choose to apply their specialized study in an education, management and/or public policy. The Subplan in Plant Science allows students to pursue the degree under two different tracks. The Research Track will provide students with the opportunity to gain expertise in biological research methodologies as applied to plant, soil and entomological problems. This degree will prepare students for technical and research positions within the industry and/or with the sound scientific grounding necessary for continuing on to a Ph.D. program. The Professional Track provides an opportunity for students who wish to combine graduate courses in the plant, soil and entomological sciences with interdisciplinary preparation in design, business management, communications, public policy or the social sciences. These students normally do not plan to continue on in a research-based Ph.D. program, and would seek employment in the public sector in education, management, or other non-research industry positions.

Students on both the Research Track and the Professional Track will complete a master's thesis.

ADMISSION TO THE PROGRAM

An applicant for admission to the Plant Science Subplan in the M.S. degree program in Agriculture should have a baccalaureate degree in agricultural biology, agronomy, horticulture or soil science, or in a closely related field. Applicants without such a degree will be required to take undergraduate level courses in the Colleges of Agriculture and Science prior to being admitted to the program. A cumulative grade point average of 2.75 overall is required, but at least a 3.0 is preferred in all agriculture and science courses. In addition, three letters of recommendation are required from individuals familiar with the applicant's academic qualifications and potential as a graduate student. All applicants are required to take the Graduate Record Examination General Test. International students seeking admission into the program must present a score of 550 on the TOEFL Exam. An applicant not meeting these standards may be conditionally admitted with the approval of the program's Graduate Admission Committee. The conditional student must comply with the requirements of admission within two quarters.

The student, along with an appointed advisory committee, will develop a program by the end of the second quarter based upon the student's interests and preparation. This will include the selection of a major professor to direct the thesis work. The student's approved program will include required basic core courses, a selection of additional courses in a specialization, electives, independent study, and a thesis. The approved program must be on file by the end of the second quarter of unconditional admission to the program.

Please note that the department has established submission deadlines to allow for sufficient time to consider application packages. Contact the department for these dates.

ADVANCEMENT TO CANDIDACY

Admission to the program does not admit a student to candidacy for the degree. Advancement to Candidacy is contingent upon the recommendation of the Graduate Coordinator and the student's advisory committee. A student who has not been admitted to candidacy is not eligible to register for the thesis/project (HPS 696). In order to qualify for Advancement to Candidacy for the Master of Science in Agriculture, Subplan in Plant Science, a student must: (1) complete at least 24 units of graduate coursework at Cal Poly with a GPA of 3.0 or better, (2) pass the Graduation Writing Test, and (3) with the major professor and Graduate Coordinator.

REQUIREMENTS

1. The degree program shall include a minimum of 45 quarter units of which at least 24 units shall be in graduate level courses. Additional coursework may be required to eliminate subject matter deficiencies. Courses at the 300 level may apply toward the fulfillment of degree requirements only with permission of the Graduate Coordinator.
2. A grade point average of 3.0 (B) or better must be maintained in all upper division undergraduate and all graduate courses. No course with a grade lower than "C" (2.0) may apply toward the fulfillment of degree requirements.
3. No more than 13 units of acceptable graduate credit may be transferred from another graduate institution. No more than 13 units taken through Continuing Education may be used on a contract. No more than 13 units of acceptable graduate credit may be petitioned by an undergraduate student. A total limit of 13 transfer and/or Continuing Education and/or units petitioned for graduate credit may be included on a master's contract. The stipulated time limit of 7 years applies to all of the above.
4. The student will develop a program based upon the curriculum outline that follows, in consultation with the major professor and the department Graduate Coordinator and with the approval of the Graduate Studies Analyst.
5. Advancement to Candidacy is required.
6. The candidate must complete a graduate formal thesis and submit at least two final copies for binding in accordance with University regulations.
7. A final oral examination covering the thesis and the candidate's area of specialization must be successfully completed.
8. The candidate must be enrolled in the University during the quarter of graduation.

THE CURRICULUM

Required courses

College Core

Introduction to Graduate Research in the			
Agricultural Sciences	AG	500	(3)
Design and Analysis of Experimental Research	AG	510	(4)
Design and Analysis of Experimental Research II:			
Regression Methods	AG	520	(4)
Research Proposal	AG	530	(3)

Presentation of Research Proposal	HPS	594	(1)
Students are required to take 3 seminars, 3 units each			(9)
Seminar in Agricultural Biology	AGB	550	
and/or Seminar in Agronomy	AGR	550	
and/or Seminar in Horticulture	HOR	550	
and/or Seminar in Soil Science	SS	550	
Thesis/Project Research	HPS	694	(1-4)
and Master's Degree Thesis/Project	HPS	696	(1-4)
Subtotal			(26-32)

Elective courses

To be selected with consent of the student's major professor and graduate committee(13-19)

Total(45)

GRADUATE COURSE DESCRIPTIONS

HPS 500 Introduction to Graduate Research in the Plant Sciences (2)

Principles, tools and techniques used in scientific research as applied to the plant and environmental sciences. Topics will include the development of literature reviews and annotated bibliographies, appropriate literature citation, on-line research methods and sources, the identification and definition of a research topic and its rationale. Readings, discussions, computer applications, and research. Two seminars.

HPS 510 Advanced Topics in the Plant and Environmental Sciences (3)

Advanced study of topics related to agronomy, horticulture, soil science and economic entomology. To include perspectives on plant biotechnology, trends in public policy related to environmental regulation, and advances in plant nutrition and soil management. Recent research in the field will be examined. Reading and reports on papers in the literature. 1 three-hour seminar. Prerequisite: unconditional graduate standing.

AGB 550 Seminar in Agricultural Biology (3)

Analysis and discussion of a selected topic in Agricultural Biology based upon examination of the literature, recent research advancements, and exposure to professional issues. May be repeated once for credit. 1 three-hour seminar.

AGR 550 Seminar in Agronomy (3)

Analysis and discussion of a selected topic in Agronomy or Soil Science based upon examination of the literature, recent research advancements, and exposure to professional issues. May be repeated once for credit. 1 three-hour seminar.

HOR 550 Seminar in Horticulture (3)

Analysis and discussion of a selected topic in Horticulture based upon examination of the literature, recent research advancements, and exposure to professional issues. May be repeated once for credit. 1 three-hour seminar.

SS 550 Seminar in Soil Science (3)

Analysis and discussion of a selected topic in Soil Science based upon examination of the literature, recent research advancements, and exposure to professional issues. May be repeated once for credit. 1 three-hour seminar.

HPS 591 Directed Study (1-2)

Individualized study, research, or readings in a specialized area under the directed of a faculty member. May be repeated for a maximum of 4 units. Students are permitted to take only 1-2 units per quarter.

HPS 594 Presentation of Research Proposal (1)

A public, oral presentation and discussion of a proposed research plan for the master's thesis. The student will develop and present, with the aid of the major professor, the scientific and statistical hypotheses, research design, proposed analytical methodologies, as well as a substantial selection from the literature review demonstrating the need and validity of the proposed thesis study. Required for Advancement to Candidacy. Unconditional graduate standing required.

HPS 692 Graduate Independent Study (1-4)

Independent study and research on a subject chosen by the student with the consultation, approval, and direction of an advisor. Course may be repeated. Maximum credit: 6 units. Unconditional graduate standing required.

HPS 694 Thesis/Project Research (1-3)

Research conducted as part of the preparation for writing a thesis or preparing a graduate project. Open only to unconditional graduate students with the approval of the graduate advisor. May be repeated for a maximum of 6 units. Students are permitted to take only 1-3 units per quarter.

HPS 696 Master's Degree Thesis/Project (1-3)

Compilation, evaluation, interpretation, and presentation in thesis or project form of supervised research. May be repeated for a maximum of 6 units. Students are permitted to take only 1-3 units per quarter.

HPS 699 Master's Degree Continuation (0)

Enrollment in this course allows candidates that have enrolled in the maximum number of thesis or project units to maintain resident status in order to receive university services. Approval of graduate program coordinator is required to register for this class. Advancement to candidacy is required. This course is graded on a mandatory credit/no credit basis.