MASTER OF SCIENCE IN MOLECULAR AND ENVIRONMENTAL PLANT SCIENCES

Chair: D. B. Hays

The Faculty of Molecular and Environmental Plant Sciences (MEPS) has members in the Colleges of Agriculture and Life Sciences, Geosciences, and Science and is administered through the Department of Soil and Crop Sciences. Degree programs are available leading to MS and PhD degree in molecular and environmental plant sciences. Program requirements are determined and supervised by MEPS faculty. Degree programs are prepared on an individual basis by the graduate students in consultation with their advisory committee. Students hold appointments, for administrative purposes, in the department of their major professors.

Molecular and environmental plant sciences seeks to understand the molecular basis for functions and behavior of plants in natural environments. It blends botany, ecology, molecular biology, chemistry, genetics and physics. Traditionally, plant scientists have been interested in the improvement of agriculture, and many of the most basic findings on photoperiodism, mineral nutrition, plant growth regulators, morphogenesis, postharvest physiology and plant competition have had major effects on modern agriculture. Today the unifying goal of plant science is to understand and improve plants. This goal involves significant interdisciplinary interactions with molecular genetics, plant breeding, environmental physics, agronomy and other plant-agriculture disciplines.

Graduate degree programs are individually designed to prepare graduates for careers in specialized areas of the discipline including molecular biology, metabolism, development, physiological ecology and environmental or crop physiology. Faculty members hold appointments in the Departments of Atmospheric Sciences, Biochemistry and Biophysics, Biology, Ecosystem Science and Management, Entomology, Horticultural Sciences, Plant Pathology and Microbiology, and Soil and Crop Sciences. Courses in these departments support the curriculum along with those in chemistry, genetics, mathematics, physics and statistics.

All graduate students participate in the student seminar program, the faculty-sponsored visiting scientist seminar program, other faculty-sponsored special programs, the core curriculum of courses and regional and national scientific meetings. These activities lend continuity and unity to the graduate student group just as research topics and the selection of supporting courses lend diversity to individual programs.

https://meps.tamu.edu

The Master of Science (MS) curriculum is designed to develop new understanding through research and creativity. Students have the option to pursue a thesis or non-thesis Master of Science degree.

Steps to Fulfill Master's Degree Requirements

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<tr>
<th>Step</th>
<th>Instruction</th>
<th>Details</th>
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<tr>
<td>1</td>
<td>Meet with departmental graduate advisor to plan course of study for first semester.</td>
<td>When: Before first semester registration. Approved by: Graduate advisor or chair of the intercollegiate faculty.</td>
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<tr>
<td>2</td>
<td>Establish advisory committee. Submit a degree plan.</td>
<td>When: Prior to the deadline imposed by the student’s college and no later than 90 days prior to final oral or thesis defense. Approved by: Advisory committee, department head or chair of the intercollegiate faculty, and Office of Graduate and Professional Studies (OGAPS).</td>
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<tr>
<td>3</td>
<td>If thesis is required, submit thesis proposal to the Office of Graduate and Professional Studies.</td>
<td>When: At least 20 working days prior to the submission of the Request for the Final Examination. Approved by: Advisory committee, department head or chair of the intercollegiate faculty and OGAPS.</td>
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<tr>
<td>4</td>
<td>Apply for degree; pay graduation fee.</td>
<td>When: During the first week of the final semester, see OGAPS calendar.</td>
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<tr>
<td>5</td>
<td>Check to be sure degree program and advisory committee are up to date and all ELP requirements (if applicable) and coursework are complete.</td>
<td>When: Well before submitting request to schedule final examination.</td>
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<tr>
<td>6</td>
<td>Complete residence requirement.</td>
<td>When: If applicable, before or during final semester. Approved by: OGAPS.</td>
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<tr>
<td>7</td>
<td>Submit request to schedule final examination.</td>
<td>When: Must be received by OGAPS at least 10 working days before exam date. See OGAPS calendar for deadlines. Approved by: Advisory committee, department head or chair of the intercollegiate faculty, and OGAPS.</td>
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Successfully complete final examination.

When: The Report of the Final Examination Form should be submitted to OGAPS within 10 days following the exam. Approved by: Advisory committee and OGAPS.

If required, upload one approved final copy of thesis as a single PDF file (http://ogaps.tamu.edu) and submit signed approval form to the Office of Graduate and Professional Studies.

When: See OGAPS calendar for deadlines. Approved by: Advisory committee, department head or chair of the intercollegiate faculty and OGAPS.

Graduation; arrange for cap and gown.

For more information, visit http://graduation.tamu.edu.

1 The online Document Processing Submission System is located on the website https://ogsdpss.tamu.edu.
2 Complete the application for degree form via the student’s Howdy portal.

Program Requirements

Program Requirements

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- Degree Plan (p. 2)
- Credit Requirements (p. 3)
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  - Final Examination/Thesis Defense (p. 4)
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Student’s Advisory Committee

After receiving admission to graduate studies and enrolling for coursework, the student will consult with the head of his or her major or administrative department (or intercollegiate faculty, if applicable) concerning appointment of the chair of his or her advisory committee. The student’s advisory committee for the MS degree will consist of no fewer than three members of the graduate faculty, representative of the student’s fields of study and research. The chair or the co-chair of the advisory committee must be from the student’s major department (or intercollegiate faculty, if applicable), and at least one or more of the members must have an appointment to a department other than the student’s major department. The outside member for students in an interdisciplinary program must have an appointment to a department different from the chair of the student’s committee.

The chair, in consultation with the student, will select the remainder of the advisory committee. The student will interview each prospective committee member to determine whether he or she is willing to serve. Only graduate faculty members located on Texas A&M University campuses may serve as chair of a student’s advisory committee. Other graduate faculty members located off campus may serve as a member or co-chair (but not chair) with a member as the chair. The chair of the committee, who usually has immediate supervision of the student’s research and thesis, has the responsibility for calling required meetings of the committee and for calling meetings at any other time considered desirable.

If the chair of a student’s advisory committee voluntarily leaves the University and the student is near completion of the degree and wants the chair to continue to serve in this role, the student is responsible for securing a current member of the University Graduate Faculty, from the student’s academic program and located near the Texas A&M University campus site, to serve as the co-chair of the committee. The Department Head or Chair of Intercollegiate faculty may request in writing to the Associate Provost for Graduate and Professional Studies that a faculty member who is on an approved leave of absence or has voluntarily separated from the university, be allowed to continue to serve in the role of chair of a student’s advisory committee without a co-chair for us to one year. The students should be near completion of the degree.

Extensions beyond the one year period can be granted with additional approval of the Dean.

If the chair of the student’s advisory committee is unavailable for an extended time in any academic period during which the student is involved in activities relating to an internship, thesis or professional paper, and is registered for courses such as 684, 691, 692 or 693, the student may request, in writing, that the department head appoint an alternate advisory committee chair during the interim period.

The duties of the committee include responsibility for the proposed degree plan, the research proposal, the thesis and the final examination. The student’s committee as a group and as individual members are responsible for advising the student on academic matters, and, in the case of academic deficiency, initiating recommendations to the Office of Graduate and Professional Studies.

The committee members’ approval on the degree plan indicate their willingness to accept the responsibility for guiding and directing the entire academic program of the student and for initiating all academic actions concerning the student. Although individual committee members may be replaced by petition for valid reasons, a committee cannot resign en masse.

Degree Plan

The student’s advisory committee, in consultation with the student, will develop the proposed degree plan. The degree plan must be completed and filed with the Office of Graduate and Professional Studies prior to the deadline imposed by the student’s college or interdisciplinary degree program, if applicable, and no later than 90 days prior to the date of the final oral examination or thesis defense.

A student should submit the degree plan using the online Document Processing Submission System (http://ogsdpss.tamu.edu).

A student submitting a proposed degree plan for a Master of Science degree should designate on the official degree plan the appropriate program option.

Additional coursework may be added to the approved degree plan by petition if it is deemed necessary by the advisory committee to correct deficiencies in the student’s academic preparation. No changes can be made to the degree plan once the student’s Request for Final
Examination or Request for Final Examination Exemption is approved by the Office of Graduate and Professional Studies.

Credit Requirement
A minimum of 32 semester credit hours of approved courses and research is required for the thesis option Master of Science degree.

A minimum of 36 semester credit hours of approved coursework is required for the Non-Thesis Option.

Ordinarily the student will devote the major portion of his or her time to work in one or two closely related fields. Other work will be in supporting fields of interest.

Transfer of Credit
A student who has earned 12 hours of graduate credit in residence at Texas A&M University may be authorized to transfer courses in excess of the limits prescribed below upon the advice of the advisory committee and with the approval of the Office of Graduate and Professional Studies. Courses taken in residence at an accredited U.S. institution or approved international institution with a final grade of B or greater may be considered for transfer credit if, at the time the courses were completed, the courses would be accepted for credit toward a similar degree for a student in degree-seeking status at the host institution. Otherwise, the limitations stated in the following section apply. Coursework in which no formal grades are given or in which grades other than letter grades (A or B) are earned (for example, CR, P, S, U, H, etc.) is not accepted for transfer credit. Courses appearing on the degree plan with grades of D, F or U may not be abolished by transfer work. Credit for thesis research or the equivalent is not transferable. Credit for coursework submitted for transfer from any college or university must be shown in semester credit hours or equated to semester credit hours. An official transcript from the university at which the transfer coursework was taken must be sent directly to the Office of Admissions.

Courses used toward a degree at another institution may not be applied for graduate credit. If the course to be transferred was taken prior to the conferral of a degree at the transfer institution, a letter from the registrar at that institution stating that the course was not applied for credit toward the degree must be submitted to the Office of Graduate and Professional Studies.

Grades for courses completed at other institutions are not included in computing the GPR.

Limitations on the Use of Transfer, Extension and Certain Other Courses
Some departments may have more restrictive requirements for transfer work. If otherwise acceptable, certain courses may be used toward meeting credit-hour requirements for the master’s degree under the following limitations.

1. The maximum number of credit hours which may be considered for transfer credit is the greater of 12 hours or one-third (1/3) of the total hours of a degree plan. The following restrictions apply:
   - Graduate and/or upper-level undergraduate courses taken in residence at an accredited U.S. institution, or approved international institution with a final grade of B or greater will be considered for transfer credit if, at the time the courses were completed, the student was in degree-seeking status at Texas A&M University, or the student was in degree-seeking status at the institution at which the courses were taken; and if the courses would be accepted for credit toward a similar degree for a student in degree-seeking status at the host institution.
   - Courses previously used for another degree are not acceptable for degree plan credit.

2. The maximum number of credit hours taken in post-baccalaureate non-degree (G6) classification at Texas A&M University which may be considered for application to the degree plan is 12.

3. Not more than 12 hours may be used in any combination of the following categories:
   - Not more than 8 hours in the combination of 691 (research), 684 (Professional Internship) or SOPH 680 may be used.
   - Not more than 8 hours of 685 (Directed Studies) may be used.
   - Not more than 3 hours of 690 (Theory of Research) may be used.
   - Not more than 3 hours of 695 (Frontiers in Research) may be used.

4. A maximum of 2 hours of Seminar (681).

5. A maximum of 9 hours of advanced undergraduate courses (300- or 400-level).

6. For graduate courses of three weeks’ duration or less, taken at other institutions, up to 1 hour of credit may be obtained for each five-day week of coursework. Each week of coursework must include at least 15 contact hours.

7. Continuing education courses may not be used for graduate credit.

8. Extension courses are not acceptable for credit.

Exceptions will be permitted only in unusual cases and when petitioned by the student's advisory committee and approved by the Office of Graduate and Professional Studies.

Thesis Option
An acceptable thesis is required for the Master of Science degree for a student who selects the thesis option program. The finished work must reflect a comprehensive understanding of the pertinent literature and express in clear English, the problem(s) for study, the method, significance and results of the student’s original research. Guidelines for the preparation of the thesis are available in the Thesis Manual, which is available online at the Office of Graduate and Professional Studies website.

After successful defense (or exemption) and approval by the student’s advisory committee and the head of the student’s major department (or chair of the intercollegiate faculty, if appropriate), the student must submit his/her thesis in electronic format as a single PDF file. The PDF file must be uploaded to the Office of Graduate and Professional Studies website. Additionally, a signed paper approval form with original signatures must be received by the Office of Graduate and Professional Studies. The PDF file and the signed approval form are required by the deadline.

Deadline dates for submitting the thesis are announced each semester or summer term in the “Office of Graduate and Professional Studies Calendar” (see Time Limit statement). These dates also can be accessed via the Office of Graduate and Professional Studies website.

Each student who submits a document for review is assessed a one-time thesis/dissertation processing fee through Student Business Services. This processing fee is for the thesis/dissertation services...
than members of the graduate faculty may, with mutual consent of
the student and the committee to which the request is addressed, meet
to consider the request. The manuscript must be resubmitted as a new
document, and the entire review process must begin again. All original
submittal deadlines must be met during the resubmittal process to graduate that
semester.

Thesis Proposal
For the thesis option Master of Science degree, the student must prepare
a thesis proposal for approval by the advisory committee and the head
of the major department or chair of the interdisciplinary faculty, if
applicable. This proposal must be submitted to the Office of Graduate
and Professional Studies at least 20 working days prior to the submission
of the request for the final examination.

Compliance issues must be addressed if a graduate student is
performing research involving human subjects, animals, infectious
biohazards and recombinant DNA. A student involved in these types
of research should check with the Office of Research Compliance and
Biosafety at (979) 458-1467 to address questions about all research
compliance responsibilities. Additional information can also be obtained
on the Office of Research Compliance and Biosafety website.

Final Examination/Thesis Defense
A student must pass a final examination by dates announced each
semester or summer term in the Office of Graduate and Professional
Studies Calendar. To be eligible to take the final examination, a student’s
GPR must be at least 3.000 for courses on the degree plan and for all
courses completed at Texas A&M which are eligible to be applied to a
graduate degree, and there must be no unabsolved grades of D, F or U
for any course listed on the degree plan. To absolve a deficient grade, the
student must repeat the course at Texas A&M University and achieve a
grade of C or better. All coursework on the degree plan must have been
completed with the exception of those hours for which the student is
registered. For thesis-option students, an approved thesis proposal must
be on file in the Office of Graduate and Professional Studies according to
published deadlines prior to the final examination or submission of the
request for exemption from the final examination.

A request to hold and announce the final examination must be submitted
to the Office of Graduate and Professional Studies a minimum of 10
working days in advance of the scheduled date for the examination. The
Office of Graduate and Professional Studies must be notified in writing of
any cancellations. A student may be given only one opportunity to repeat
the final exam for the master’s degree and that must be within
a time period that does not extend beyond the end of the next regular
semester (summer terms are excluded).

For thesis option students, the final examination covers the thesis and
all work taken on the degree plan and at the option of the committee may
be written or oral or both. The final examination may not be administered
before the thesis is available to all members of the student’s advisory
committee in substantially final form, and all members have had
adequate time to review the document. The examination is conducted
by the student’s advisory committee as finally constituted. A thesis
option student must be registered in the University in the semester or
summer term in which the final examination is taken. Persons other
than members of the graduate faculty may, with mutual consent of
the candidate and the major professor, attend final examinations for
advanced degrees. Upon completion of the questioning of the candidate,
all visitors must excuse themselves from the proceedings. A positive vote
by all members of the graduate committee with at most one dissension
is required to pass a student on his or her exam. A department, or
interdisciplinary degree program, may have a stricter requirement
provided there is consistency within all degree programs within a
department or interdisciplinary degree program.

The Report of the Final Examination Form must be submitted with
original signatures of all the committee members approved by the
Office of Graduate and Professional Studies. If an approved committee
member substitution (1 only) has been made, his/her signature must
also be submitted to the Office of Graduate and Professional Studies. If
necessary, multiple copies of the form may be submitted with different
committee member original signatures. If an approved committee
member substitution (1 only) has been made, his/her signature must
be included on the form submitted to the Office of Graduate and
Professional Studies.

A thesis option candidate may petition to be exempt from his/her final
examination provided his/her degree plan GPR is 3.500 or greater and he/
she has the approval of the advisory committee, the head of the student’s
major department, or intercollegiate chair, if appropriate, and the Office
of Graduate and Professional Studies. It is required that the petition
for exemption be submitted the same semester the student intends to
submit the thesis.

Non-Thesis Option
For non-thesis option students, a final comprehensive examination may
be required.

The final exam cannot be held prior to the mid point of the semester if
questions on the exam are based on courses in which the student is
currently enrolled. If a student has completed all required degree plan
coursework, the student is not required to be registered for classes in the
semester the final examination is administered (unless he/she holds an
assistantship). For specific final examination requirements, a student
should check the program requirements for the degree which he/she is
pursuing.

Exam results must be submitted with original signatures of only
the committee members approved by the Office of Graduate and
Professional Studies. If an approved committee member substitution (1
only) has been made, his/her signature must also be submitted to the
Office of Graduate and Professional Studies.

A student pursuing the non-thesis option is not allowed to enroll in 691
(research) for any reason and 691 may not be used for credit toward a
non-thesis option Master of Science degree. A maximum of 4 credit hours
of 684 (Professional Internship), 8 credit hours of 685 (Directed Studies),
and up to 3 credit hours of 690 (Theory of Research) or 695 (Frontiers in
Research) may be used toward the non-thesis option Master of Science
degree. In addition, any combination of 684, 685, 690 and 695 may not
exceed 25 percent of the total credit hour requirement shown on the
individual degree plan. All requirements for the non-thesis option Master
of Science degree other than those specified above are the same as for
the thesis option degree.
Additional Requirements

**Residence**
In partial fulfillment of the residence requirement for the degree of Master of Science, the student must complete 9 resident credit hours during one regular semester or one 10-week summer semester in resident study at Texas A&M University. Upon recommendation of the student’s advisory committee, department head or Chair of the Interdisciplinary Program, if appropriate, and with approval of the Office of Graduate and Professional Studies, a student may be granted exemption from this requirement. Such a petition, however, must be approved prior to the student’s registration for the final 9 credit hours of required coursework.

Students who are employed full-time while completing their degree may fulfill total residence requirements by completion of less-than-full time course loads each semester. In order to be considered for this, the student is required to submit a Petition for Waivers and Exceptions along with verification of his/her employment to the Office of Graduate and Professional Studies.

See Residence Requirements (http://catalog.tamu.edu/graduate/academic-expectations-general-degree-requirements/residence-requirements).

**Continuous Registration**
A student in the thesis option of the Master of Science program who has completed all coursework on his/her degree plan other than 5V98, 5V99, and 691 (research) is required to be in continuous registration until all requirements for the degree have been completed. See Continuous Registration Requirements (http://catalog.tamu.edu/graduate/academic-expectations-general-degree-requirements/continuous-registration).

**Time Limit**
All degree requirements must be completed within a period of seven consecutive years for the degree to be granted. A course will be considered valid until seven years after the end of the semester in which it is taken. Graduate credit for coursework which is more than seven calendar years old at the time of the final examination (oral or written) may not be used to satisfy degree requirements.

A student who has chosen the thesis option must have the final corrected version of the thesis cleared by the Office of Graduate and Professional Studies no later than one year after the final examination, or approval of a petition for exemption from the final exam, or within the seven-year time limit, whichever occurs first. Failure to do so will result in the degree not being awarded.

**Foreign Languages**
No specific language requirement exists for the Master of Science degree.

Application for Degree
For information on applying for your degree, please visit the Graduation (http://catalog.tamu.edu/graduate/academic-expectations-general-degree-requirements/degree-requirements/#graduation) section.