

TEXAS A&M PLANT BREEDING Bulletin ***July 2012***

We were notified recently that our proposal to deliver the Master of Science degree in Plant Breeding via distance technology was approved by the Texas Higher Education Coordinating Board. Thus, beginning with the Spring Semester 2013, students can apply and register as distance education students and receive an M.S. in Plant Breeding without residence on campus at College Station. This action also makes possible any number of arrangements where the M.S. student can never come to campus or spend a summer or some other length of time on campus. The approval covers both thesis option (TO) and non-thesis option (NTO) M.S. degrees in plant breeding.

The M.S. in Plant Breeding NTO requires a minimum of 36 semester credit hours past a B.S. degree plus a report and the defense of that report on an internship or some other graduate advisory committee approved activity. It does not require original research that results in a thesis. All requirements for this degree are the same as those found in the Graduate Catalog at <http://catalog.tamu.edu/>, <http://soilcrop.tamu.edu/graduatedegrees.html>, or <http://hortsciences.tamu.edu/graduate-programs/>, with the exception that the on-campus residence requirement is waived.

The M.S. in Plant Breeding TO requires a minimum of 32 semester credit hours past a B.S. degree and a written thesis on original research directed by the student's graduate advisory committee. The unique requirement to obtain the M.S. in Plant Breeding TO is that there must be a Ph.D. scientist at the student's location who can qualify for membership in the Graduate Faculty at Texas A&M University and serve as co-chair of the student's graduate advisory committee. The student also must have access to research facilities and have a commitment by his/her employer to provide such facilities for the conduct of original plant breeding research.

All courses and requirements other than physical presence on campus at Texas A&M University are the same as for on-campus students. All courses are the same as those taken by on-campus students and taught by the same professors but delivered via the internet. Graduate advisory committee meetings and all conferences among co-chairs, committee, and student can be via electronic media.

Individuals interested in the M.S. in Plant Breeding distance program should:

- [1] Contact either Wayne Smith, Associate Department Head for Soil and Crop Sciences, David Byrne, Associate Department Head for Horticultural Sciences, or LeAnn Hague, Distance Education Coordinator in Soil and Crop Sciences, to discuss the application process (contact information below).**
- [2] Apply for admission through the Apply Texas on-line application process (<http://ogs.tamu.edu/prospective-students/admissions/applying-to-graduate-school/>).**
- [3] All admission requirements, including GPA, GRE, and English Proficiency for non-U.S. citizens, are the same as for those applying for admission for on-campus programs.**

The following information is available in a downloadable format at <http://soilcrop.tamu.edu/graduateprogram.html>

Distance Education in Plant Breeding

As the global population increases, providing food, fiber and fuel to meet growing demand has become a significant challenge. We are one of the top tier U.S. universities training future plant breeders to meet this challenge and have expanded our effort through our Distance Education Program in Plant Breeding. We seek to alleviate hunger and poverty through the genetic improvement of plants while educating and developing plant breeders worldwide.

Overview

This program is an extension of the existing Plant Breeding programs offered by the Department of Soil and Crop Sciences and the Department of Horticultural Science at Texas A&M University. We offer a non-thesis option M.S. and thesis option M.S. in Plant Breeding completely at a distance to students unable to study on-campus in a traditional setting. This program is designed for individuals employed in private industry, CGIAR centers, government agencies, non-government organizations, and other agriculture professionals who need and desire additional knowledge and training in plant breeding but cannot relocate to a university campus. Distance Education students will take advantage of the same curriculum available to on-campus students with identical course content and professors. Our unique program is designed to deliver a high quality plant breeding education to students across the globe.

Available Degrees

Master of Science in Plant Breeding (Non-Thesis Option)

Description

The non-thesis option M.S. in Plant Breeding requires 36 hours of coursework, four of which are an internship activity at the student's present company or locale. This is considered a terminal degree for students who do not wish to pursue their education beyond the M.S. level. Courses will vary depending upon the student's career goals and current situation. Students will work with a graduate advisor to determine which courses best suit their needs. A typical degree plan will include a variety of course work in plant breeding, molecular and environmental plant sciences, statistics, plant pathology, entomology, agricultural economics, and education and human development.

Time for Completion

Since this program is designed for industry professionals who will continue to be employed full time during their graduate studies, typical course load will be 1 to 2 classes per semester. Many factors will effect completion time, but most students can expect to finish within 3-5 years.

Master of Science in Plant Breeding (Thesis Option)

Description

The thesis option M.S. in Plant Breeding requires 32 semester credit hours of course work and a thesis on original research. Student research can be completed at the student's location. An on-site Ph.D. scientist, educator, or supervisor who qualifies as an adjunct member of the Texas A&M graduate faculty must be available to serve as co-chair of the student's graduate advisory committee and be able to direct thesis research locally. Students will have an on-campus co-chair to oversee the academic aspect of their degree. Communication with committee members, examinations, and thesis defense will be conducted via the internet.

Requirements Leading to the Master of Science Degree

1. 32 graduate credit hours beyond the B.S. degree; general requirements are:
 - a. 23 course hours approved by the student's advisory committee and the Office of Graduate Studies.
 - b. Statistics 651 or equivalent.
 - c. An exit seminar discussing research findings (SCCS 681).
 - d. No more than 8 hours of SCSC 691 (Research) or SCSC 685 (Directed Studies).
 - e. No more than 9 hours of upper level (300 or 400) undergraduate courses and no graduate credit for the following courses required for a B.S. degree:
 - SCSC 101
 - SCSC 105
 - SCSC 301
 - f. See Graduate Catalog for additional requirements, <http://tam.u.edu/admissions/catalogs/>.
2. A thesis written on original research as directed by student's advisory committee.

Time for Completion

Time for completion will vary depending on number of courses taken per semester and the student's original research project. Typical completion time will be 3-5 years.

Course Delivery

Each course has been uniquely designed by the instructor to provide course content in an accessible, understandable format. All courses will be delivered on-line, completely at a distance

via Texas A&M University's E-learning system. This system utilizes the Blackboard Vista learning platform to allow students to view instructional materials, interact with other students and faculty, and complete assignments and examinations. *(To check your computer's compatibility with this system visit Texas A&M's [E-Learning](#) and perform the E-Learning Browser Check.)* The web based nature of course delivery allows students to access and complete course material at a time convenient to them.

For thesis option MS students, graduate advisory committee meetings, examinations, and research defense will be handled through electronic communication, including video and teleconferencing. **No campus visit will be required.**

Costs

Tuition and fees are set by the university and will vary based on tuition rates, residency, course load and applicable fees. An **estimate** of tuition and fees for a 3 hour course are:

Texas Resident Tuition and Fees: \$1700 per 3 hour course.

Non-resident Tuition and Fees: \$2600 per 3 hour course

Scholarships and financial aid are available through the [Office of Financial Aid](#). Your graduate advisor can suggest other potential sources of funding. In addition, some employers provide financial assistance for their employee's educational expenses.

Admission Procedure

Applicants should follow all of the guidelines and procedures to apply for graduate studies in a department offering a plant breeding degree at Texas A&M University at College Station using the Texas A&M on-line admission process. On-line application to graduate studies at Texas A&M University can be found at admissions.tamu.edu. [The Department of Soil & Crop Sciences and the Department of Horticultural Sciences confer graduate degrees in plant breeding.](#)

Additional items to be provided by the applicant:

Non-Thesis Option

- A letter of application directed to Wayne Smith, David Byrne, or LeAnn Hague providing sufficient background information to demonstrate the student's commitment and ability to complete an on-line Master of Science (NTO) program and internship, including prospective internship location or activity.

Thesis-Option

- A letter of application directed to Wayne Smith, David Byrne, or LeAnn Hague providing sufficient background information to demonstrate the student's aptitude to conduct plant breeding research.
- Identification of the area of plant breeding research to be pursued and its importance to the agricultural industry.
- A one or two-page letter of support from the perspective distance co-chair indicating commitment of facilities and time for the conduct of the proposed research.

Students applying to the *Department of Soil and Crop Sciences* must send these additional items to the attention of Wayne Smith, Department of Soil and Crop Sciences, 2474 Texas A&M University, college Station, TX 77843-2474 (cwsmith@tamu.edu).

Students applying to the *Department of Horticultural Sciences* must send the additional items to the attention of David Byrne, Department of Horticultural Sciences, 2133 TAMU, College Station, TX 77843-2133 (dbyrne@tamu.edu).

Some of the Available Courses

The following courses are currently available and included in the distance program.

Course Name	Credit Hours
SCSC 304: Undergraduate Plant Breeding	3
SCSC 306: Crop Production	3
SCSC 422: Soil Fertility	3
SCSC 641: Plant Breeding	3
SCSC 642: Quantitative Plant Breeding	3
SCSC 643: Quantitative Genetics	3
SCSC 654: Genomic Analysis	3
SCSC 660: Experimental Designs	3
STAT 651: Statistics I	3
STAT 652: Statistics II	3
STAT 653: Statistics III	3
AGEC 314: Marketing Agriculture Production	3
EHRD 602: Human Resource Development	3
EHRD 605: Leadership	3

Contact Information

For more information contact:

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Additional Websites

[eLearning at Texas A&M University](#)

[Office of Graduate Studies – Texas A&M University](#)

Reminders:

NAPB Annual Meeting, August 6-8, 2012 in Indianapolis. The National Association of Plant Breeders will hold its annual meeting August 6-8, 2012 in Indianapolis, with the theme of “Sustaining Life through Plant Improvement.” The annual meeting is an opportunity for breeders and allied scientists to stay updated on recent innovations in plant science and to discuss public policy issues relevant to plant breeding.



The meeting also provides an important venue for graduate students to present their research, meet with potential employers, and become acquainted with plant breeding graduate students from other universities. This year’s meeting will be hosted by Dow AgroSciences.

More information and registration for the meeting is available at www.plantbreeding.org. Early registration ends June 1.

American Society of Agronomy, Crop Science Society of America, and Soil Science Society of America international meeting will be in Cincinnati, OH, 21 to 24 October. The theme for this year’s meeting is “Visions for a Sustainable

Planet.” Additional information can be found at <https://www.acsmeetings.org/>.



Please direct comments concerning this bulletin to Wayne Smith, cwsmith@tamu.edu or 979.845.3450.