

# MASTER OF WATER MANAGEMENT AND HYDROLOGICAL SCIENCE

**Program Chair:** Thomas McDonald

**Program Coordinator:** Raquel Granados Aguilar

The Water Management and Hydrological Science (WMHS) graduate degree program is supervised by an interdisciplinary faculty from multiple department and colleges. The faculty have expertise in the bio-physical, geo-chemical, management, public health, social sciences and engineering fields. The program offers two masters' degrees (thesis and non-thesis options) and a PhD. The curriculum is designed to allow students to become leaders in their focal areas of water while making connections with colleagues in other related disciplines.

The Master of Water Management and Hydrological Science (MWM) degree is a non-thesis degree designed to prepare students for careers in the critically important areas of water management. It is structured to enhance problem solving using technical and managerial skills. The degree incorporates principles from economics, engineering, management, policy analysis and science and requires a comprehensive final exam. This approach provides students with the education and training to contribute to advancements in managing water quality and quantity for the world, the nation, and the State of Texas.

The minimum requirement for the MWM degree is 30 credit hours. Students complete 8 credit hours of WMHS courses, 12 credit hours of common body of knowledge water courses, and 10 credit hours of water courses.

For more information on degree application, course requirements, and program advisors go to the website <http://waterprogram.tamu.edu>.

## Program Requirements

### Program Requirements

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### Student's Advisory Committee

After receiving admission to the graduate studies and enrolling for coursework, the student will consult with the graduate coordinator concerning appointment of the chair of his or her advisory committee. The student's advisory committee for the master's degree will consist of no fewer than three members of the graduate faculty. The chair or one of the co-chairs 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 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 tenure or tenure-track members of the Graduate Committee Faculty, affiliated with the Water Management and Hydrological Science program, and located on Texas A&M University campuses may serve as chair of a student's advisory committee. Other graduate faculty members may serve as co-chair with an individual from the Water Management and Hydrological Science faculty. The chair of the committee, who usually has immediate supervision of the student's degree program, has the responsibility 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 and Dean of the Graduate and Professional School 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 up 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 or professional paper and is registered for courses such as 684, 692 or 693, the student may request, in writing, that the Program Chair appoint an alternate advisory committee chair during the interim period.

The duties of the committee include responsibility for the proposed degree plan, any professional study or project, and the final examination. In addition, the committee, as a group and as individual members, are responsible for counseling the student on academic matters, and, in the case of academic deficiency, initiating recommendations to the Graduate and Professional School.

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 Graduate and Professional School prior to the second semester of registration, and no later than 90 days prior to the date of the final oral examination.

This proposed degree plan should be submitted through the online Document Processing Submission System located on the website <https://ogsdps.tamu.edu>.

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 made to the degree plan once the student's Request for Final Examination or

Request for Final Examination Exemption is approved by the Graduate and Professional School.

## Credit Requirement

The minimum requirements for the non-thesis option are 30 hours of coursework and a satisfactory final comprehensive oral examination. A student is required to complete 8 hours of required core water courses, 12 hours of common body of knowledge courses, and 10 hours of designated water courses.

## 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 above upon the advice of the advisory committee and with the approval of the Graduate and Professional School. 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 might 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 preceding 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 absolved 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 Graduate and Professional School.

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

## 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. A zero credit 684 or 685 course is only allowed for non-thesis option master's students. A zero credit 681 course can be used for either thesis or non-thesis option master's students. Other courses, including 691 (Research) hours, are not eligible for zero credit.
4. Any combination of 684 and 685 may not exceed a total of 6 credit hours. A maximum of 4 hours of 684 (Professional Internship) and up to 6 hours of 685 (Directed Studies) are allowed.
5. A maximum of 2 hours of 681 (Seminar).
6. A maximum of 9 hours of advanced undergraduate courses (400-level).
7. 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.
8. No more than 3 credit hours of 690 (Theory of Research) or 695 (Frontiers in Research) may be used.
9. Continuing education courses may not be used for graduate credit.
10. Extension courses are not acceptable for credit.
11. For non-distance degree programs, no more than 50 percent of the credit hours required for the program may be completed through distance education courses.
12. To receive a graduate degree from Texas A&M University, students must earn one-third or more of the credits through the institution's own direct instruction. This limitation also applies to joint degree programs.

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

## Thesis Option

Please note that the thesis option does not apply to the MWM Water Management and Hydrological Science program.

## Final Examination/Thesis Option

A student must pass a final examination by dates announced each semester or summer term in the Graduate and Professional School Calendar. To be eligible to take the final examination, a student's GPA 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 Graduate and Professional School 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 Graduate and Professional School a minimum of 10 working days in advance of the scheduled date for the examination. The Graduate and Professional School must be notified in writing of any cancellations. A student may be given only one opportunity to repeat the final examination.

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 only the committee members approved by the Graduate and Professional School. If an approved committee member substitution (1 only) has been made, his/her signature must also be submitted to the Graduate and Professional School. 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 Graduate and Professional School.

A thesis option candidate may petition to be exempt from his/her final examination provided his/her degree plan GPA 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 Graduate and Professional School. 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 Graduate and Professional School. If an approved committee member substitution (1 only) has been made, his/her signature must also be submitted to the Graduate and Professional School.

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

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## Residence

In partial fulfillment of the residence requirement for the degree of Master of Water Management and Hydrological 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. A minimum of 1 credit hour must be in a non-distance education delivery mode. Semesters during which the student is enrolled in all distance education coursework will not count toward fulfillment of the residence requirement. Upon recommendation of the student's advisory committee, department head or Chair of the Interdisciplinary Program, if appropriate, and with approval of the Graduate and Professional School, 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, students are required to submit a Petition for Waivers and Exceptions along with verification of their employment to the Graduate and Professional School.

See Residence Requirements (<http://catalog.tamu.edu/graduate/academic-expectations-general-degree-requirements/#degreerequirementstext>).

## 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 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/#registrationandacademicstatustext>).

## 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 Graduate and Professional School 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/#degreerequirementstext>) section.