TEXAS A&M UNIVERSITY
Water Management &
Hydrological Science

2024-2025*
GRADUATE STUDENT HANDBOOK

POLICIES AND PROCEDURES

*Revised 04-16-24

waterprogram.tamu.edu

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Important Contacts Information

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WMHS Program Coordinator

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CSA Building 208 B | 3147 TAMU
979 845 1579 | raquelg@tamu.edu

Office of Admissions

General Services Complex Suite 1601
979 845 1060 | admissions.tamu.edu

Office of the Registrar

General Services Complex Suite 1501
979 845 1031 | registrar.tamu.edu

International Student & Scholar Services (ISS)

110 Pavilion | 1226 TAMU
979 845 1824 | global.tamu.edu/isss/

Graduate and Professional School

204 Nagle Hall | 1113 TAMU
979 845 3631 | grad.tamu.edu

Thesis and Dissertation Services

thesis.tamu.edu and thesis@tamu.edu

Housing

reslife.tamu.edu and aggiesearch.tamu.edu
888 451 3896 | housing@tamu.edu

Emergency

emergency.tamu.edu
Off-campus 911 | From campus phone 9 911

Student Health Services

A.P. Beutel Health Center | 1264 TAMU
979 458 8310 | shs.tamu.edu

1 Introduction and Overview

The missions of the Water Management & Hydrological Science (WMHS) program are to:

- Prepare the next generation of water scientists, hydrologists, and managers for professional and academic careers.
- Provide graduate students with strong technical skills in water disciplines including the interconnectedness of biophysical and social sciences in water management.
- Improve the availability, security, and reliability of human water supplies.

The WMHS degree program is administered by an interdisciplinary faculty from multiple departments and colleges. Faculty have expertise in the biophysical and social sciences, and in engineering.

The WMHS Program is under the guidance of an Executive Committee, the College of Arts & Sciences, and the Graduate and Professional School Dean. The Department of Geography provides administrative and student office space and computer facilities.

A thesis (MS) and a non-thesis option (MWM) master's and a Ph.D. degree are offered through the program. The curriculum is designed to allow students to become leaders in their focal areas of water while making connections with peers in other related disciplines.

2 General Requirements

This document summarizes policies and procedures to be followed by graduate students in the WMHS program. Students should consult the Graduate and Professional Catalog and the Graduate and Professional School on all other matters not discussed in this handbook.

Students should email the WMHS Program Coordinator and the WMHS Program Chair with any questions about WMHS program policies and procedures. These emails should include the student's UIN. Research-related questions should be directed to the student's Graduate Advisory Committee.

Students should inform the WMHS Program Coordinator, the WMHS Program Chair, and their Graduate Advisory Committee Chair immediately whenever a serious problem (medical, financial, personal) disrupts their ability to attend classes or conduct research, so that they can file any necessary paperwork.

2.1 Grade Point Average

Graduate students must maintain a cumulative grade point average (GPA) of 3.0 (4.0 scale) for all courses listed on the degree plan and eligible for application toward a graduate degree. Graduate students will not receive graduate degree credit for undergraduate courses taken on a satisfactory/unsatisfactory (S/U) basis. Graduate courses on the degree plan may not be taken S/U, except for 681, 690, and 691. Graduate courses not on the degree plan may be taken S/U.

If a student's cumulative GPA for courses listed on the degree plan falls below 3.0, he/she will be considered scholastically deficient and may be dropped from the University unless the minimum GPA is attained by the end of the next long semester.

Scholastically deficient students are not eligible for WMHS support including scholarships, assistantships, and travel grants. If a students' GPA falls below 3.0, they must let the WMHS Program Coordinator, the WMHS Program Chair, and their graduate advisory committee chair know immediately.

2.2 Language Requirement

International students, whose native language is not English, are required to show English language proficiency. For requirements, see: grad.tamu.edu/academics/academic-success-resources/elp

2.3 Continuous Registration

Graduate students receiving 12 months of university graduate research assistantship must register for 9 credit hours during each of the Fall and Spring semesters, and 6 hours during the Summer or as indicated in their assistantship letter. This constitutes full-time status. Students who are self-supported (self-funded) are not required to meet these guidelines. See notes below.

All students working on a degree requiring a thesis or dissertation must be in continuous registration. This continuous registration includes graduate students who have completed all course work on their degree plans. Once all formal course work is completed and the student is not on assistantship or fellowship, continuous registration is satisfied by registration for at least 1 and not more than 4 hours during the Fall and Spring semesters. Summer semester registration is ONLY required if the student is on funding, plans to take examination, or otherwise use University resources or facilities or defend their thesis or dissertation. The continuous registration requirement can be satisfied either:

In Absentia: the student must not have access to or use of facilities or properties belonging to the Texas A&M University System during the semester;

In Residence: students who will be on campus or located at one of the Research and Extension Centers or Experiment Stations, and therefore using University facilities must register "in residence" for at least 1 credit hour during the Fall and Spring semesters, and the Summer semester if taking exams or defending.

Notes: *International Students* may have additional requirements and should consult with International Student and Scholars Services (phone: 979-845-1824; e-mail: isss@tamu.edu or j1scholars@tamu.edu; visit: global.tamu.edu/isss/).

Students that were **awarded a scholarship** may be required to register full-time. Please refer to the award letter for details and requirements.

Self-Supported Students are not required to register during the summer sessions regardless of whether or not they have completed their formal course work.

2.4 Transfer of Credits

Students may request the transfer of credits from another institution if those credits have not been applied towards a previous degree. To initiate the process to transfer credits from another institution, students must receive written approval from their Graduate Advisory committee (chair and committee members) as well as from the WMHS Executive Committee. Additionally, students must follow the Texas A&M University Student Rule 9.3 and the Transfer of Credit guidelines stated in the Graduate and Professional Catalog.

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.

2.5 Academic Requirements Completion System (ARCS)

- Students with an approved degree plan will access ARCS by logging into Howdy.
- From the ARCS dashboard, students can click on milestones to create "requests."
- Students can then monitor request approval status.
- Students will have the option to submit the following in ARCS:
    - Preliminary Exam Request
    - Proposal Approval Form
    - Final Exam (Defense) Request
    - Final Exam Exemption Request
    - Copyright & Availability Form
    - Thesis/Dissertation/Record of Study Approval Form

2.6 Milestones

Students can use the Academic Requirements Completion System (ARCS) on the Howdy portal to view their milestones and to submit requests. See section 2.5.

NOTE: The milestones may appear differently depending on the degree type. The example shown here is for a PhD degree.

If a student has not submitted any requests, they will automatically be directed to the "Degree Plan" milestone. Once the student has submitted a request, the system will automatically take them to that open request.

Incomplete milestones are shown in gray, completed milestones will appear green, and selected milestones appear in maroon.

3 Other Important Information

3.1 Official communications

Rule 61 rule establishes e-mail as an official means of communication (equivalent to the U.S. Postal Service) at Texas A&M University. It also establishes student responsibilities for use of official TAMU e-mail accounts and official e-mail correspondence. Upon a student's admission to Texas A&M University, they will be assigned an active student e-mail account within five working days. It then becomes the responsibility of the student to access this e-mail account in a responsible and timely manner. It is every student's responsibility to check their Texas A&M University official e-mail account for University and WMHS Program communications on a frequent and consistent basis. See student-rules.tamu.edu/rule61/

3.2 Transit and Parking Permit

Information on transit and parking is available at transport.tamu.edu. The site provides information on on-campus and off-campus buses, bicycle services, parking, and other modes of transportation available to students. This site also provides permit pricing and useful information. Students should read all the information in their parking packet. Traffic on campus is closely monitored for safety reasons.

3.3 Student ID Card

Students should follow instructions in their admission packets to request a Student ID Card. For more information visit: myaggiecard.tamu.edu. Your Student ID card will be used for access to university events and library use.

3.4 Office Assignment

Students may be assigned office space in labs or buildings under the immediate control of their committee chair or co-chair. If they are to be assigned office space in one of the WMHS graduate student offices, they should see the WMHS Program Coordinator.

3.4.1 After hours building access – Computing Services Annex (CSA)

Students who will require access to office and computer labs after 6:00 pm and/or during weekends, must submit their request at: bars.tamu.edu

3.4.2 Keys

Students will need key(s) to their office and other areas depending upon responsibilities assigned by their committee chair. Keys for WMHS offices can be obtained from the WMHS Program Coordinator. Keys are numbered and assigned to students individually. Students are responsible for their key(s). Graduating students and students moving to an alternate location must plan to return their keys to the department business office personally BEFORE they leave Texas A&M University or College Station.

3.5 Computer Lab

Graduate students have open access to computers housed in the College of Arts & Sciences**.** Please visit with the WMHS Program Coordinator and IT staff in the College of Arts & Sciences for access codes. For IT help please contact artsci-help@tamu.edu

3.6 Travel authorization

All graduate students who must travel on official business must complete the proper travel authorization forms **prior** to such travel. Students should visit with their committee chair for proper forms. Students receiving a Travel Grant must have a Travel Request approved on Concur prior to such travel.

3.7 Dates and deadlines

Students must consult and adhere to the Graduate and Professional School dates and deadlines (grad.tamu.edu/knowledge-center/dates-and-deadlines/dates-and-deadlines) and the Academic Calendar (registrar.tamu.edu/Academic-Calendar) each semester.

4 WMHS General Requirements

4.1 Meet with WMHS Program Coordinator

Students should inform the WMHS Program Coordinator of any issues via email. If the issues cannot be resolved over email, students should schedule a meeting with the Program Coordinator. To request a meeting, students should email the Program Coordinator and include their UIN, the topics they want to discuss, any specific questions, their preferred dates and times for a meeting, and if they prefer the meeting to be in-person or virtual. Students should indicate if the request is **urgent**.

Students are encouraged to request a meeting with the WMHS Program Coordinator when approaching milestones such as at the beginning of their first semester to review class schedule (all students), the semester prior to requesting their preliminary examination (PhD students only), the semester prior to requesting their final examination (all students), and the semester prior to applying for graduation (all students).

4.2 Graduate Advisory Committee

Students should, in consultation with their graduate advisory committee chair, identify appropriate faculty in the WMHS Program and other programs and departments to serve as members of their graduate advisory committee. All committee members must be members of the Graduate Faculty at Texas A&M University. Only tenure or tenure-track faculty with a WMHS membership may serve as a committee chair. Other WMHS faculty may serve as committee co-chair. Check faculty eligibility at gradcom.tamu.edu/faculty

4.2.1 Master of Water Management (MWM) Advisory Committee

The student's advisory committee will consist of at least three members of the graduate faculty, representative of the student's fields of interest. The committee chair and at least one member must be in the WMHS faculty. One member must have an appointment to a department different from the chair of the student's committee. The advisory committee must be established before the end of the student's ***second*** long semester. Failure to do so will result in a registration block by the Graduate and Professional School.

4.2.2 Master of Science (MS) Advisory Committee

The student's advisory committee will consist of at least three members of the graduate faculty, representative of the student's fields of study and research. The committee chair and at least one member must be in the WMHS faculty. One member must have an appointment to a department different from the chair of the student's committee. The advisory committee must be established before the end of the student's ***second*** long semester. Failure to do so will result in a registration block by the Graduate and Professional School.

4.2.3 Doctor of Philosophy (PhD) Advisory Committee

The student's advisory committee will consist of at least four members of the graduate faculty representative of the student's several fields of study and research. The chair and at least two members must be in the WMHS faculty, and at least one member must have an appointment to a department different from the chair of the student's committee. The advisory committee must be established before the end of the student's *third* long semester. Failure to do so will result in a registration block by Graduate and Professional School.

4.3 Degree Plan

4.3.1 Master's degrees

In consultation with their advisory committee, students MUST submit a degree plan that identifies the courses leading to the masters' degree. The degree plan must be approved by the student's advisory committee, the Program Coordinator, Program Chair, and the Graduate and Professional School.

The degree plan must be submitted to the Graduate and Professional School before the end of the student's second long semester and no later than 90 days prior to final oral or thesis defense.

Failure to do so will result in a registration block being placed on the student by the Graduate and Professional School. Degree plans are submitted through an online process initiated by the student after consultation with their advisory committee.

4.3.2 Doctoral degree

In consultation with their advisory committee, students MUST submit a degree plan that identifies the courses leading to the Ph.D. degree. The degree plan must be approved by the student's advisory committee, the Program Coordinator, Program Chair, and the Graduate and Professional School.

The degree plan must be submitted to the Graduate and Professional School before the end of the student's third long semester and no later than 90 days prior to preliminary examination.

Failure to do so will result in a registration block being placed on the student by the Graduate and Professional School. Degree plans are submitted through an online process initiated by the student after consultation with their advisory committee.

4.4 Degree Evaluation

Students are encouraged to run regular degree evaluations on the Howdy portal to:

- verify eligibility for funding (tuition waivers, assistantships, fellowships, etc.).
- evaluate progress to a degree.
- review the courses taken each semester and individual course grades.
    - X grades: students with X grades on courses on their degree plan will not be able to clear for graduation. Report X grades to the WMHS Program Coordinator as soon as possible.
- verify completion of non-course degree requirements.
- determine degree plan and cumulative GPA.

5 WMHS Degree Requirements

5.1 3+2 Environmental Geoscience (ENGS) + Master of Water Management & Hydrological Science Degree (MWM)

Applications to the 3+2 program can be submitted when students have completed 90 credit hours in the Bachelor of Science in Environmental Geoscience program.

Students admitted in the 3+2 program can take undergraduate and graduate courses in the same semester. If you plan on taking undergraduate and graduate courses in the same semester, you must schedule a preregistration meeting with both the Environmental Geoscience advisors and the WMHS Program Coordinator.

For academic advising regarding undergraduate courses and their undergraduate degree requirements, students in the 3+2 program must consult with the Environmental Geoscience advisor. Students will consult with the WMHS Program Coordinator about graduate courses and their graduate degree requirements. Students in the 3+2 program will meet with the WMHS Program Coordinator for registration every semester from the time they are admitted.

3+2 students must finish all the credit hours, and complete all non-coursework requirements, to obtain both the Bachelor of Science in Environmental Geoscience and the Master of Water Management degrees. Students in the 3+2 program will apply for graduation when they complete both degrees and will only attend their master's degree graduation.

The program includes a total of 150 hours, which up to 0 hours may be applied toward both the Bachelor of Science in Environmental Geoscience and the Master of Water Management in Water Management and Hydrological Science.

Students in the 3+2 Environmental Geoscience (ENGS) + Master of Water Management & Hydrological Science Degree (MWM) program will also follow the guidelines detailed in section 5.2 Master of Water Management and Hydrological Science Degree (MWM) of this Handbook.

5.2 Master of Water Management & Hydrological Science Degree (MWM)

This degree is intended to provide professional graduate education with an emphasis on the use of problem solving, management, and technical skills.

A minimum of 30 credit hours, as shown in the figure below, is required to obtain the Master of Water Management.

REQUIRED WMHS COURSES (9 HOURS)	
WMHS 601/GEOG 634	Hydrology and Environment (3 hrs)
WMHS 602	Contemporary Issues in Water Resources (3 hrs)
WMHS 681	Seminar (must take one Fall and one Spring seminar)
*WMHS 685	Directed Studies for Final Exam (1 hour)
REQUIRED WATER COURSES (9 HOURS)	
Minimum of 9 hours from the required water course list	
COMMON BODY OF KNOWLEDGE WATER COURSES (12 HOURS)	
LAW 659	Water Law and Regulation (3 hrs)
AGEC 606	Water Resources Economics (3 hrs)
CVEN 664	Water Resources Engineering, Planning, and Management (3 hrs)
GEOL 614	Advanced Hydrogeology (3 hrs)
FINAL EXAM	
A final exam is required. As part of the exam process, students, in consultation with the advisory committee chair, will prepare a presentation addressing a water issue to present to their advisory committee. *A one credit course (WMHS 685) in the semester of the final exam may be used for presentation of the Final Exam.	

5.2.1 Time limit

All degree requirements must be completed within 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 may not be used to satisfy degree requirements. A student must have the final corrected copies of the thesis cleared by the Graduate and Professional School within one year of the semester in which the final exam is taken.

5.2.2 Nearing Completion

Students must follow the following steps to be cleared for graduation. See section 5.2.3.

- Apply for graduation through the Howdy portal.
- Work on final examination presentation under the guidance of the graduate advisory committee.
- Pass the final examination.

5.2.3 Summary of Steps Leading to Master of Water Management & Hydrological Science Degree

The following is a summary of the steps leading to the Master of Water Management & Hydrological Science degree. It is the student's responsibility to follow the steps and meet all necessary requirements and deadlines. Consult the Graduate Catalog for more detailed information about the program requirements: Water Management and Hydrological Science - MWM.

☑	What to do	When	Approved or checked by
☐	Meet with WMHS Coordinator/Chair	Before first semester starts	WMHS Coordinator/Chair
☐	Establish Advisory Committee and submit degree plan online	Before end of second semester to prevent registration block by the Graduate and Professional School	WMHS Coordinator, Advisory Committee, WMHS Chair, the Graduate and Professional School
☐	Check degree program and advisory committee are up-to-date, and coursework is complete	Prior to beginning of final semester	WMHS Coordinator
☐	Register for WMHS 685	Take this course in your final semester	WMHS Coordinator
☐	Apply for graduation: Howdy portal →My Record→ Degree Evaluation→ Application for Graduation. Note: you must pay any debts to the university to be able to apply for graduation. Pay for graduation fees	Beginning of final semester Check the Graduate and Professional School calendar for deadlines	The Graduate and Professional School
☐	Communicate with your Advisory Committee Chair about the topic you plan to present in your Final Exam	Beginning of final semester	Advisory Committee
☐	Obtain availability for Final Examination date from your Advisory Committee	Within the first month of final semester	Advisory Committee
☐	Submit Final Exam presentation to Advisory Committee	At least 2 weeks before final exam	Advisory Committee
☐	Submit request to schedule Final Exam on ARCS	Must be received by the Graduate and Professional School at least 10 working days prior to the exam	WMHS Coordinator, Advisory Committee, WMHS Chair, the Graduate and Professional School
☐	Successfully complete final examination	The Report of the Final Exam form should be submitted by the Advisory Committee within 10 days following the exam date	Advisory Committee, the Graduate and Professional School

Note: MWM students will graduate with the College of Arts & Sciences.

5.3 Master of Science Degree (MS)

The degree is designed for students with technical backgrounds who wish to complement their primary discipline by obtaining scientific, technical, or managerial expertise in water. In addition to the water courses students are required to take one research methods class and one statistics class from the designated list.

A minimum of 32 credit hours, as shown in the figure below, is required to obtain the Master of Science degree.

REQUIRED WMHS COURSES (8 HOURS)	
WMHS 601/GEOG 634	Hydrology and Environment (3 hrs)
WMHS 602	Contemporary Issues in Water Resources (3 hrs)
WMHS 681	Seminar (must take one Fall and one Spring seminar)
REQUIRED WATER COURSES (12 HOURS)	
Minimum of 12 hours from the required water course list	
REQUIRED RESEARCH METHODS AND STATISTICS COURSES (6 HOURS)	
One research methods class (3 hrs) and one statistics class (3 hrs) from the designated list	
ELECTIVES (UP TO 4 HOURS)	
Hours are determined by the student and their advisory committee. Tools, planning, or certificate courses are allowed.	
RESEARCH (MINIMUM OF 1 HOUR)	
Hours determined by student and advisory committee. Students may opt to take more coursework in lieu of research hours. One hour of WMHS 691 is the university minimum requirement for a thesis.	

Note: Maximum of 3 credit hours of 685 Directed Studies are allowed in the degree plan.

5.3.1 Time limit

All degree requirements must be completed within 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 may not be used to satisfy degree requirements. A student must have the final corrected copies of the thesis cleared by the Graduate and Professional School within one year of the semester in which the final exam is taken.

5.3.2 Nearing Completion

Students must follow the following steps to submit a thesis and be cleared for graduation. See section 5.3.3.

- Apply for graduation through the Howdy portal.
- Share defense flyer with advisory committee and WMHS Program Coordinator and Chair via email.
- Pass the final examination/oral defense.
- Turn in the thesis written approval form.
- Make sure to follow all formatting and copyright guidelines and acquire all required approval forms.
- Turn in the Copyright and Availability form.
- Submit (if necessary) copyright permission for previously published work.
- Submit (if necessary) permission for figures and tables, or indicate that a Fair Use Analysis was done.

Click here to view the Graduate and Professional School's guide on document submission.

5.3.3 Summary of Steps Leading to Master of Science Degree

The following is a summary of the steps leading to the Master of Science in Water Management & Hydrological Science. It is the student's responsibility to follow the steps and meet all necessary requirements and deadlines. Consult the Graduate Catalog for more detailed information about the program requirements: Water Management and Hydrological Science - MS.

☑	What to do	When	Approved or checked by
☐	Meet with WMHS Coordinator/Chair	Before first semester starts	WMHS Coordinator/Chair
☐	Establish Advisory Committee and submit degree plan online	Before end of second semester to prevent registration block by the Graduate and Professional School	WMHS Coordinator, Advisory Committee, WMHS Chair, the Graduate and Professional School
☐	Prepare thesis research proposal	At the direction of the Advisory Committee Chair	Advisory Committee
☐	Submit thesis research proposal and Research Proposal Approval Form to the Graduate and Professional School	No later than 20 working days prior to submitting the request and announcement of final examination	Advisory committee, WMHS Chair, *Research Compliance and Biosafety, the Graduate and Professional School
☐	Apply for graduation: Howdy portal →My Record→ Degree Evaluation→ Application for Graduation. Note: pay any debts to the university to apply for graduation. Pay graduation fees	Beginning of final semester Check the Graduate and Professional School calendar for deadlines	The Graduate and Professional School
☐	Check degree program and advisory committee are up-to-date, and coursework is complete	Well before submitting request to schedule final examination	WMHS Coordinator
☐	Complete residence requirement	If applicable, before or during final semester	The Graduate and Professional School
☐	Obtain availability for Final Examination date from your Advisory Committee	Within the first month of final semester	Advisory Committee
☐	Submit Thesis (approved by Committee Chair) to Advisory Committee	At least 2 weeks before final exam	Advisory Committee
☐	Submit request to schedule Final Exam on ARCS Share defense flyer with advisory committee and WMHS Program Coordinator and Chair via email.	Must be received by the Graduate and Professional School at least 10 working days prior to the exam	WMHS Coordinator, Advisory Committee, WMHS Chair, the Graduate and Professional School
☐	Successfully complete final examination	The Report of the Final Exam form should be submitted by the Advisory Committee within 10 days following the exam date	Advisory Committee, the Graduate and Professional School
☐	Submit thesis as a single PDF file to etd.tamu.edu	See The Graduate and Professional School calendar for deadlines	Advisory Committee, WMHS Chair, the Graduate and Professional School

*If needed. Visit vpr.tamu.edu/research-compliance-and-biosafety/ for more information.

5.4 Doctor of Philosophy Degree (PhD)

This degree is designed to give students comprehensive knowledge of water science, hydrology, and research methods. Each student must have a chair before he/she can be accepted into the program. Students who have not taken graduate courses in statistics and research methods will be required to take one research methods course and two statistics courses from the designated list.

A minimum of 64 credit hours as shown in the figure below, beyond a master's degree with thesis, is required.

REQUIRED WMHS COURSES (9 HOURS)	
WMHS 601/GEOG 634	Hydrology and Environment (3 hrs)
WMHS 602	Contemporary Issues in Water Resources (3 hrs)
*WMHS 681	Seminar (minimum of 3 hours; must take one Fall and one Spring seminar)
REQUIRED WATER COURSES (18 HOURS)	
Minimum of 18 hours from the required water course list	
REQUIRED RESEARCH METHODS AND STATISTICS COURSES (9 HOURS)	
At least one methods course (3 hrs) and two statistics courses (6 hrs) from the designated lists	
ELECTIVES (9 OR MORE HOURS)	
Elective courses to be chosen by the student and their advisory committee. Tools, planning, or certificate courses are allowed.	
RESEARCH (18 HOURS OR MORE)	
A dissertation written on original research as directed by the student's advisory committee. Students may opt to add additional courses in lieu of some research hours.	

Note: Maximum of four credit hours of 685 Directed Studies are allowed in the degree plan.

*Students may opt to follow all requirements and obtain the Certificate of Completion from the Academy for Future Faculty (cte.tamu.edu/Graduate-Student-Support/AFF) in lieu of ONE of the required seminars.

5.4.1 Steps Leading to a Doctor of Philosophy

Students should refer to section 2.5 Academic Requirements Completion System (ARCS) for information about the forms and requests that can be initiated by students in this system. The steps that must be successfully completed to fulfill the requirements for the Ph.D. degree in WMHS include:

5.4.2 English Language Requirement

International Students must meet English language requirements before they can schedule their preliminary exams. See: grad.tamu.edu/academics/academic-success-resources/elp

5.4.3 Residence Requirement

Graduate students who have lived away from College Station and attended classes at the College Station campus in a sporadic fashion must verify with the Graduate and Professional School that they have met the residence requirements. These requirements state that the student must reside and attend classes at the College Station campus for 2 consecutive long semesters. The Graduate and Professional School must confirm that the residence requirement has been fulfilled before students can schedule their final exam.

Students should consult the Graduate Catalog or the Graduate and Professional School on all other matters not discussed in this handbook. Additional information and requirements can be found in the Texas A&M University Graduate Catalog (catalog.tamu.edu/graduate/).

5.4.4 Time limit

All requirements for doctoral degrees must be completed within a period of ten consecutive calendar years for the degree to be granted. A course will be considered valid until 10 years after the end of the semester in which it is taken. Graduate credit for coursework more than ten calendar years old at the time of the final oral examination may not be used to satisfy degree requirements.

After passing the required preliminary oral and written examinations for a doctoral degree, the student must complete the final examination within four years of the semester in which the preliminary exam is taken. Exams taken in between terms will expire at the end of the term that ended prior to the exam.

A final corrected version of the dissertation or record of study in electronic format as a single PDF file must be cleared by the Graduate and Professional School within one year of the semester in which the final exam is taken. Exams taken in between terms will expire at the end of the term that ended prior to the exam.

5.4.5 Nearing Completion

Students must follow the following steps before submitting a dissertation and clear for graduation. See section 5.4.6.

- Apply for graduation through the Howdy portal.
- Share defense flyer with advisory committee and WMHS Program Coordinator and Chair via email.
- Pass the final examination/oral defense.
- Turn in the dissertation written approval form.
- Students must follow all formatting and copyright guidelines and acquire all required approval forms.
- Turn in the Copyright and Availability form.
- Submit (if necessary) copyright permission for previously published work.
- Submit (if necessary) permission for figures and tables, or indicate that a Fair Use Analysis was done.
- Clear for graduation.
- Complete the SED/AAUDE Survey (Doctoral only).

Click here to view the Graduate and Professional School's guide on document submission.

5.4.6 Summary of Steps Leading to Doctoral Degree

The following is a summary of the steps leading to the Doctor of Philosophy in Water Management & Hydrological Science degree. It is the student's responsibility to follow the steps and meet all necessary requirements and deadlines. Consult the Graduate Catalog for more detailed information about the program requirements: Water Management and Hydrological Science - PHD.

☑	What to do	When	Approved or checked by
☐	Meet with WMHS Coordinator/ Chair	Before first semester starts	WMHS Coordinator/Chair
☐	Establish Advisory Committee and submit degree plan online	Before end of second semester to prevent registration block by the Graduate and Professional School	WMHS Coordinator, Advisory Committee, WMHS Chair, the Graduate and Professional School
☐	Complete, if applicable, English Language Proficiency requirements	Before preliminary exam	The Graduate and Professional School
☐	Check degree program and advisory committee are up-to-date, and coursework is complete	Well before submitting request to schedule preliminary examination	WMHS Coordinator
☐	Review the Preliminary Exam Checklist to verify that you have met all the Doctoral Degree Requirements and are thus eligible to take the examination	Several weeks before the proposed date of the preliminary exams	Advisory Committee Chair, WHMS Program Chair, WMHS Program Coordinator, the Graduate and Professional School
☐	Prepare and submit petitions, if necessary, from review of eligibility requirements	At least 3 weeks before preliminary exams	Advisory Committee Chair, WHMS Program Chair, the Graduate and Professional School
☐	Obtain availability for Preliminary Examination date from your Advisory Committee and determine date(s) of the Preliminary Examination	Must be within 6 credit hours of completion of all coursework or no later than the end of the semester following completion of all coursework on the degree plan	Advisory Committee, WMHS Program Chair and WMHS Program Coordinator
☐	Complete Preliminary Examination and Submit Checklist and the Report of the Preliminary Examination	No later than the end of the semester following the completion of the formal coursework on the degree plan	Advisory Committee Chair, WHMS Program Chair, WMHS Program Coordinator, the Graduate and Professional School
☐	Submit dissertation research proposal and Research Proposal Approval Form to the Graduate and Professional School	At least 20 working days prior to submission of the Request and Announcement of Final Examination	Advisory committee, WMHS Chair, *Research Compliance and Biosafety, the Graduate and Professional School
☐	Complete residence requirement	Before submitting request to schedule final oral examination	The Graduate and Professional School

☐ Submit dissertation draft to Advisory Committee Chair for review and approval	Before submitting dissertation to advisory committee	Advisory Committee Chair
☐ Submit dissertation draft (approved by Committee Chair) to Advisory Committee	After review and approval by Chair	Advisory Committee
☐ Apply for graduation: Howdy portal →My Record→ Degree Evaluation→ Application for Graduation. Note: you must pay any debts to the university to be able to apply for graduation. Pay for graduation fees	Beginning of final semester Check the Graduate and Professional School calendar for deadlines	The Graduate and Professional School
☐ Obtain availability for Final Examination date from your Advisory Committee	Beginning of final semester	Advisory Committee
☐ Submit request to schedule Final Exam on ARCS Share defense flyer with advisory committee and WMHS Program Coordinator and Chair via email.	Must be received by the Graduate and Professional School at least 10 working days prior to the exam	WMHS Coordinator, Advisory Committee, WMHS Chair, the Graduate and Professional School
☐ Successfully complete final examination	The Report of the Final Exam form should be submitted by the Advisory Committee within 10 days following the exam date	Advisory Committee, the Graduate and Professional School
☐ Turn in dissertation written approval form	After passing the final exam	Advisory Committee and WMHS Program Chair
☐ Submit dissertation as a single PDF file to etd.tamu.edu. See the Document Submission page for further information	See The Graduate and Professional School calendar for deadlines	Advisory Committee, WMHS Chair, the Graduate and Professional School
☐ Turn in Copyright and Availability form. Submit (if necessary) copyright permission for previously published work and permission for figures and tables, or indicate Fair Use Analysis.	To clear for graduation	The Graduate and Professional School
☐ Graduation; arrange for cap and gown. | More information		

*If needed. Visit vpr.tamu.edu/research-compliance-and-biosafety/ for more information.

Note: PhD students will graduate at the commencement and hooding ceremony for doctoral students.

Appendix A

REQUIRED WATER COURSES

Please check the WMHS Course Availability spreadsheet linked in the WMHS Program Orientation & Information canvas course for updated information on course offerings each semester.

*Graduate courses are taught if/when instructors are available. Check the course schedule prior to each semester.

Course #	Course category	Course name	Semester typically offered
AGEC 606	Water Management, Planning, and Economics	Water Resource Economics	Spring
ATMO 631	Climate	Climate Modeling	Not often
BAEN 669	Water Quality	Water Quality Engineering	Spring
BAEN 672	Watershed Hydrology	Small Watershed Hydrology	Fall
BAEN 673	Watershed Hydrology	Modeling Small Watersheds	Spring
BAEN 674	Groundwater & Subsurface Hydrology	Vadose Zone Hydrology	Spring
BAEN 675	Groundwater & Subsurface Hydrology	Hydrology Across Scale	Spring
CVEN 602	Watershed Hydrology	Remote Sensing in Hydrology	Spring
CVEN 604	Water Quality	Environmental Analysis of Treatment Systems	Spring
CVEN 627	Surface Water Hydrology	Engineering Surface Water Hydrology	Spring
CVEN 628	Surface Water Hydrology	Advanced Hydraulic Engineering	Fall
CVEN 664	Water Management, Planning, and Economics	Water Resources Engineering, Planning and Management	Spring
CVEN 665	Water Management, Planning, and Economics	Water Resources Systems Engineering	Spring
CVEN 674	Groundwater & Subsurface Hydrology	Groundwater Engineering	Spring
CVEN 675	Surface Water Hydrology	Stochastic Hydrology	Fall
CVEN 682	Water Quality	Environmental Remediation of Contaminated Sites	Fall
ECCB 620	Ecohydrology	Ecological Restoration of Wetland and Riparian Ecosystems	Fall
ECCB 635	Ecohydrology	Ecohydrology	Spring
ESSM 628	Water Management, Planning, and Economics	Wetland Delineation	Summer
ESSM 636	Water Management, Planning, and Economics	Wildland Watershed Management	Summer
GEOG 612	Climate	Applied Climatology	Not often
GEOG 626	Watershed Hydrology	Fluvial Geomorphology	Spring
GEOG 634	Watershed Hydrology	Hydrology and Environment	Fall

Course #	Course category	Course name	Semester typically offered
GEOG 642	Climate	Past Climates	Fall
GEOL 610	Groundwater & Subsurface Hydrology	Field Methods in Hydrogeology	Spring
GEOL 614	Groundwater & Subsurface Hydrology	Advanced Hydrogeology	Spring
GEOL 621	Groundwater & Subsurface Hydrology	Contaminant Hydrogeology	Spring
GEOL 625	Groundwater & Subsurface Hydrology	Applied Groundwater Modeling	Spring
GEOL 633	Surface Water Hydrology	River Restoration	Spring
GEOL 640	Water Quality	Geochemistry of Natural Fresh Waters	Spring
GEOL 646	Climate	Past Climates	Fall
GEOL 689	Groundwater & Subsurface Hydrology	Tracers in Hydrogeology	N/A
OCNG 650	Water Quality	Aquatic Microbial Ecology	Spring
LAW 659	Water Management, Planning, and Economics	Water Law & Regulation	Fall
PHEO 605	Public Health	Chemical Hazard Exposure	Fall
PHEO 675	Public Health	Water and Environmental Public Health	Spring
PHEO 676	Public Health	Environmental Sustainability and Public Health	Fall
PSAA 624	Water Management, Planning, and Economics	Water Policy and Management	Fall
RWFM 625	Water Management, Planning, and Economics	Watershed Analysis and Planning	Fall
SCSC 657	Water Quality	Environmental Soil and Water Science	Spring
SCSC 658	Water Quality	Watershed and Water Quality Management	Spring
WFSC 628	Ecohydrology	Wetland Ecology and Pollution	Fall

*Additional water courses, if offered:

- GEOL 620 Geology of Groundwater
- GEOL 633 River Restoration
- GEOL 646 Biogeochemical Cycling in Subsurface Systems

Appendix B

REQUIRED RESEARCH METHODS AND STATISTICS COURSES

Please check the WMHS Course Availability spreadsheet linked in the WMHS Program Orientation & Information canvas course for updated information on course offerings each semester.

*Graduate courses are taught if/when instructors are available. Check the course schedule prior to each semester.

RESEARCH METHODS COURSES

Course #	Course Name	Semester typically offered
AGEC 607	Research Methodology	Fall and Spring
BUSH 632	Quantitative Methods in Public Management II	Spring
CARC 601	Foundations of Research in Planning and Design	Fall
CARC 602	Research Methods in Planning and Design	Spring
EPSY 636	Techniques of Research	Fall
PLAN 604	Planning Methods I	Fall
PLAN 613	Planning Methods and Techniques	Spring
SOCI 623	Measurement of Sociological Parameters	Fall
URSC 641	Analytic Methods in Landscape and Urban Research	Fall

+Any other methods course relevant to student's research

STATISTICS COURSES

Course #	Course Name	Semester typically offered
BAEN 662	Statistical Methods in Biological and Agricultural Engineering	Spring
STAT 601	Statistical Analysis	Fall
STAT 626	Methods in Time Series Analysis	Summer and Fall
STAT 651	Statistics in Research I	Every semester
STAT 652	Statistics in Research II	Spring and Fall
STAT 653	Statistics in Research III	Spring

+Any other methods course relevant to student's research

Students whose research involve time series data are advised to take STAT 626

Students whose research involve surveys may take STAT 651 and STAT 652

Appendix C

POSSIBLE ELECTIVES

Please check the WMHS Course Availability spreadsheet linked in the WMHS Program Orientation & Information canvas course for updated information on course offerings each semester.

*Graduate courses are taught if/when instructors are available. Check the course schedule prior to each semester.

Course #	Course category	Course name	Semester typically offered
AGEC 604	Economics, Law, Management, Planning, and Policy	Natural Resource Economics	Spring
ATMO 629	Biophysical Sciences	Climate Change	Spring and Fall
BAEN 642	Biophysical Sciences	Water-Energy-Food Nexus: Toward Sustainable Resource Management	Spring
BAEN 651	Informatics and Geographic Information Systems	Geographic Information Systems	Fall
BAEN 652	Informatics and Geographic Information Systems	Advanced Topics in Geographic Information Systems	Spring
BAEN 665	Biophysical Sciences	Design of Biological Waste Treatment Systems	Spring and Fall
CVEN 658	Informatics and Geographic Information Systems	Civil Engineering Applications of GIS	Varies
ECCB 671	Economics, Law, Management, Planning, and Policy	Ecological Economics	Spring
ECCB 622	Biophysical Sciences	Biogeochemistry of Terrestrial Ecosystems	Spring
GEOG 651	Informatics and Geographic Information Systems	Remote Sensing for Geographical Analysis	Spring and Fall
GEOG 660	Informatics and Geographic Information Systems	Applications in GIS	Spring and Fall
GEOG 661	Informatics and Geographic Information Systems	Digital Image Processing and Analysis	Spring
GEOG 665	Informatics and Geographic Information Systems	GIS-Based Spatial Analysis and Modeling	Every semester
GEOG 695	Informatics and Geographic Information Systems	Frontiers in Geographic Information Science	Spring
PHEO 613	Biophysical Sciences	Introduction to Environmental Health Disparities	Fall
PHEO 621	Biophysical Sciences	Transport and Persistence of Contaminants in the Environment	Fall
PLAN 625	Informatics and Geographic Information Systems	GIS in Landscape and Urban Planning	Every semester
PLAN 626	Informatics and Geographic Information Systems	Advanced GIS in Landscape Architecture and Urban Planning	Spring
PLAN 641	Informatics and Geographic Information Systems	Problems of Environmental Planning Administration	Fall
POSC 619	Biophysical Sciences	Molecular Methods for Microbial Characterization	Fall
SCSC 650	Biophysical Sciences	Mode of Action and Environmental Fate of Herbicides	Spring

Appendix D

WMHS FACULTY

Please visit waterprogram.tamu.edu for a complete list of WMHS Faculty members and check membership roles at gradcom.tamu.edu/

WMHS Faculty that have taught a water course, chaired, or served on a student committee in the last 3 years

Name	Department	College
Andrew J. Moodie	Geography (GEOG)	Arts & Sciences
Benjamin Wherley	Soil & Crop Sciences (SCSC)	Agriculture & Life Sciences
Binayak Mohanty	Biological & Agricultural Engineering (BAEN)	Agriculture & Life Sciences
Bradford Wilcox	Ecology & Conservation Biology (ECCB)	Agriculture & Life Sciences
Mani Rouhi Rad	Agricultural Economics (AGEC)	Agriculture & Life Sciences
Francisco Olivera	Civil & Environmental Engineering (CVEN)	Engineering
Franco Marcantonio	Geology & Geophysics (GEPL)	Arts & Sciences
Fouad Jaber	Biological & Agricultural Engineering (BAEN)	Agriculture & Life Sciences
Gabriel Eckstein	School of Law	
Garret McKay	Civil & Environmental Engineering (CVEN)	Engineering
Hongbin Zhan	Geology & Geophysics (GEPL)	Arts & Sciences
Huilin Gao	Civil & Environmental Engineering (CVEN)	Engineering
Inci Guneralp	Geography (GEOG)	Arts & Sciences
Itza Mendoza	School of Public Health	
Jaehak Jeong	Biological & Agricultural Engineering (BAEN)	Agriculture & Life Sciences
James Brumbelow	Civil & Environmental Engineering (CVEN)	Engineering
John Nielsen-Gammon	Atmospheric Sciences (ATMO)	Arts & Sciences
Juan Enciso	Biological & Agricultural Engineering (BAEN)	Agriculture & Life Sciences
Kelly Brumbelow	Multidisciplinary Engineering	Engineering
Maria Sanchez Flores	Texas Water Resources Institute (TWRI)	
Michael Bishop	Geography (GEOG)	Arts & Sciences
Oliver Frauenfeld	Geography (GEOG)	Arts & Sciences
Patricia Smith	Biological & Agricultural Engineering (BAEN)	Agriculture & Life Sciences
Peter Knappett	Geology & Geophysics (GEPL)	Arts & Sciences
Rabi Mohtar	Biological & Agricultural Engineering (BAEN)	Agriculture & Life Sciences
Raghavan Srinivasan	Ecology & Conservation Biology (ECCB)	Agriculture & Life Sciences
Ronald Kaiser	Rangeland, Wildlife & Fisheries Management (RWFM)	Agriculture & Life Sciences
Salvatore Calabrese	Biological & Agricultural Engineering (BAEN)	Agriculture & Life Sciences
Samuel Ma	Civil & Environmental Engineering (CVEN)	Engineering
Srinivasulu Ale	Biological & Agricultural Engineering (BAEN)	Agriculture & Life Sciences
Terry Gentry	Soil & Crop Sciences (SCSC)	Agriculture & Life Sciences
Thomas McDonald	School of Public Health	
Vijay Singh	Biological & Agricultural Engineering (BAEN)	Agriculture & Life Sciences
Virender Sharma	School of Public Health	
Wendy Jepson	Geography (GEOG)	Arts & Sciences
Zong Liu	Biological & Agricultural Engineering (BAEN)	Agriculture & Life Sciences

Other interested WMHS Faculty

Anish Jantrania	Biological & Agricultural Engineering (BAEN)	Agriculture & Life Sciences
Brianna Wyatt	Soil & Crop Sciences (SCSC)	Agriculture & Life Sciences
Kung-Hui Chu	Civil & Environmental Engineering (CVEN)	Engineering
Sreeram Vaddiraju	Chemical Engineering	Engineering
Suresh Pillai	Food Science & Technology (FSTC)	Agriculture & Life Sciences
Wenzhe Jiao	Ecology & Conservation Biology (ECCB)	Agriculture & Life Sciences