TEXAS A&M UNIVERSITY
Water Management &
Hydrological Science

2022-2023
GRADUATE STUDENT HANDBOOK

POLICIES AND PROCEDURES

waterprogram.tamu.edu

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Important Contacts Information

WMHS Chair

Dr. Thomas McDonald, Professor and Chair
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WMHS Program Coordinator

Dr. Raquel Granados Aguilar
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 Services (ISS)

110 Pavilion | 1226 TAMU
979 845 1824 | iss.tamu.edu

Graduate and Professional School

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

Thesis and Dissertation Services

thesis.tamu.edu

Housing

reslife.tamu.edu and aggiesearch.tamu.edu/housing
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.

Two masters' degrees (a thesis and a non-thesis option) 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 Water Management & Hydrological Science program.

Students should consult the Graduate Catalog and the Graduate and Professional School on all other matters not discussed in this handbook.

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.

2.2 Language Requirement

International students, whose native language is not English, are required to show English language proficiency.

For requirements, see: https://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 are not required to meet these guidelines.

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 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.

Note: ***International Students*** may have additional requirements and should consult with **International Student Services** (phone: 979 845 1824; email: iss@tamu.edu; visit: iss.tamu.edu) to remain in compliance with immigration requirements and enrollment status.

Note: ***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.

An extract from the Texas A&M University Graduate and Professional Catalog regarding Transfer of Credits is included below:

"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".

3 Other Important Information

3.1 Financial and Departmental Travel/Driving

Every graduate student should make an appointment with the WMHS Chair and/or his/her advisor as soon as possible upon arrival on campus. If applicable they will advise the student on insurance options, initiate the employment process, and initiate the process to determine eligibility to drive departmental vehicles.

3.2 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 related communications on a frequent and consistent basis. See https://student-rules.tamu.edu/rule61/

3.3 Transit and Parking Permit

Information on transit and parking is available at http://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 information in their parking packet. Traffic on campus is closely monitored for safety reasons.

3.4 Student ID Card

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

3.5 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.

3.5.1 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: http://bars.tamu.edu

3.5.2 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.

3.6 Computer Lab

Graduate students have open access to computers housed in the Department of Geography**.** Please visit with the WMHS Program Coordinator and IT staff in the Department of Geography for access codes.

3.7 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.

4 WMHS General Requirements

4.1 Meet with WMHS Program Coordinator

Students must request a meeting with the WMHS Program Coordinator as indicated below:

- Before the beginning of their first semester to review class schedule (all students)
- The semester prior to requesting their preliminary examination (PhD students)
- The semester prior to requesting their final examination (all students)
- The semester prior to applying for graduation (all students)

4.2 Graduate Advisory Committee

Students should, in consultation with their committee chair, identify appropriate faculty in the WMHS Program and other 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 may serve as a committee chair. Other WMHS faculty may serve as a committee co-chair. Check faculty eligibility at https://gradcom.tamu.edu/faculty

4.2.1 Master of Water Management (MWM) Advisory Committee

Normally consists of three members. At least two members must be members of the WMHS faculty.

The WMHS Program Chair will serve as the chair for all MWM student advisory committees. 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

Normally consists of three members. At least two members must be members of the WMHS faculty. The committee chair must be a member of the WMHS faculty. 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

Normally consists of the chair and at least three additional members. The chair and at least two members must be in the WMHS faculty. 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 (https://ogsdpss.tamu.edu/) 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 on-line process initiated by the student after consultation with his/her 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 (https://ogsdpss.tamu.edu/) 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. This is an on-line process initiated by the student after consultation with his/her 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 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; and/or

determine degree plan and cumulative GPA.

5 WMHS Degree Requirements

5.1 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 (8 HOURS)	
WMHS 601/GEOG 634	Hydrology and Environment (3 hrs)
WMHS 602	Contemporary Issues in Water Resources (3 hrs)
WMHS 681	Seminar (minimum of 2 credit hours)
WMHS 685	Final Exam
REQUIRED WATER COURSES (9 HOURS)	
Minimum of 9 hours from the required water course list	
COMMON BODY OF KNOWLEDGE WATER COURSES (12 HOURS)	
RENR 662	Environmental Law and Policy (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 graduate committee. A one credit course (WMHS 685) in the semester of the final exam may be used for presentation.	

5.1.1 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 ensure that he/she follows the steps and meet all the requirements.

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

☑	ITEM	TIMELINE/WHEN
☐	Meet with WMHS Coordinator/Chair	Before first semester starts
☐	Establish Advisory Committee	Before end of second semester
☐	Submit degree plan Document Processing Submission System (DPSS) https://ogsdpss.tamu.edu/	Before end of second semester (the Graduate and Professional School will block registration if not submitted) *Approval:* On-line approval process
☐	Apply for degree Pay for graduation fees	Beginning of final semester
☐	Submit presentation to Advisory Committee	At least 2 weeks before final exam
☐	Submit request to the Graduate and Professional School for permission to schedule final exam	Must be received by the Graduate and Professional School at least 10 working days prior to the exam. *Approval:* Advisory Committee, WMHS Program Chair, and the Graduate and Professional School

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

5.2 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 (minimum of 2 credit hours)
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 determined by student and student advisory committee. Any tools, planning or certificate courses are allowed. Students may opt to add an additional course in lieu of some research hours.	
RESEARCH HOUR (MINIMUM OF 1 HOUR)	
Hours determined by student and student advisory committee. One hour of WMHS 691 is the University minimum for a thesis. Student may opt to take more coursework in lieu of research hours.	

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

5.2.2 Summary of Steps Leading to Master of Science Degree

The following is a summary of the steps leading to the Master of Science degree. It is the student's responsibility to ensure that he/she follows the steps and meet all the requirements.

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

☑	ITEM	TIMELINE/WHEN
☐	Meet with WMHS Coordinator/Chair	Before first semester starts
☐	Establish Advisory Committee	Before end of second semester
☐	Submit degree plan Document Processing Submission System (DPSS) https://ogsdpss.tamu.edu/	Before end of second semester (the Graduate and Professional School will block registration if not submitted) *Approval:* On-line approval process
☐	Prepare thesis proposal	At the direction of Advisory Committee Chair
☐	Submit thesis proposal to the Graduate and Professional School	At direction of Advisory Committee Chair (at least 15 working days prior to submission of the Request for Final Exam to the Graduate and Professional School)
☐	Apply for degree Pay for graduation fees	During first week of final semester
☐	Submit thesis to Advisory Committee	At least 2 weeks before final exam
☐	Submit request to the Graduate and Professional School for permission to schedule final exam	Must be received by the Graduate and Professional School at least 10 working days prior to the exam. *Approval:* Advisory Committee, WMHS Program Chair, and the Graduate and Professional School
☐	Submit thesis	See Thesis Manual for guidelines *Approval:* Advisory Committee and WMHS Program Chair

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

5.3 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 and two statistics courses from the designated list.

A minimum of 64 credit hours 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 credit hours)
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 list.	
ELECTIVES (9 OR MORE HOURS)	
Elective courses to be chosen by student and their advisory committee. Any tools or planning or certificate courses are allowed. Students may opt to add an additional course in lieu of some research hours.	
RESEARCH HOUR (18 HOURS OR MORE)	
A dissertation written on original research as directed by the student's advisory committee	

Note: Maximum of four credit hours of 685 Directed Studies are allowed in the degree plan.
A student may opt to follow all the classes and obtain the Certificate of Completion from the Academy for Future Faculty (https://cte.tamu.edu/Graduate-Student-Support/AFF) in lieu of ONE of the required seminars.

5.4 Steps Leading to a Doctor of Philosophy

There are several steps that must be successfully completed to fulfill the requirements for the Ph.D. degree in WMHS. These include:

5.4.1 Complete English Language Requirements

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

5.4.2 Complete Residence Requirements

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 (http://catalog.tamu.edu/).

5.4.3 Summary of Steps Leading to Doctoral Degree

The following is a summary of the steps leading to the PhD degree. It is the student's responsibility to ensure that he/she follows the steps and meet all the requirements.

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

☑	ITEM	TIMELINE/WHEN
☐	Meet with WMHS Coordinator/Chair	Before first semester starts
☐	Establish Advisory Committee	Before end of third long semester
☐	Submit degree plan Document Processing Submission System (DPSS) https://ogsdpss.tamu.edu/	Before end of third long semester (the Graduate and Professional School will block registration if not submitted) *Approval:* On-line process after consultation with advisory committee
☐	Complete, if applicable, English Language Proficiency requirements	Before preliminary exam
☐	Review Preliminary Eligibility Requirements (see the Graduate and Professional School website for forms and links for checklist)	Several weeks before the proposed date of the preliminary exams. Checklist must be signed by Advisory Committee Chair and WHMS Program Chair Checklist is held and submitted to the Graduate and Professional School with the results of the preliminary exam(s)
☐	Prepare and submit petitions found necessary from review of eligibility requirements	At least 3 weeks before preliminary exams *Approval:* Advisory Committee, WMHS Program Chair, and the Graduate and Professional School
☐	Determine date(s) of the preliminary exam	Student must be within 6 credit hours of completion of all formal coursework or no later than the end of the semester following completion of all formal course work on the degree plan *Approval:* Advisory Committee and WMHS Program Chair

☑	ITEM	TIMELINE/WHEN
☐	Complete preliminary exams and submit Report of the Preliminary Examination and the Preliminary Examination Checklist to the Graduate and Professional School	Complete within 3 weeks and report results to the Graduate and Professional School within 10 working days *Approval:* Advisory Committee For record keeping also provide a copy to WMHS Program Chair
☐	Submit dissertation proposal	At a minimum of no less than 15 working days prior to request for the final exam *Approval:* Advisory Committee and WMHS Program Chair
☐	Complete residency requirement	Before submitting request to schedule final exam *Approval:* The Graduate and Professional School
☐	Submit dissertation draft to Advisory Committee Chair for review and approval	Before submitting dissertation to committee
☐	Submit dissertation draft to committee	After review and approval by Chair
☐	Apply for degree and pay graduate fees	During first week of final semester *Approval:* The Graduate and Professional School
☐	Submit request for permission to hold and announce final exam See the Graduate and Professional School calendar for deadlines	Must be received by the Graduate and Professional School at least 10 working days prior to exam *Approval:* Advisory Committee, WMHS Program Chair, and the Graduate and Professional School Note: Results to be submitted to the Graduate and Professional School within 10 working days of exam
☐	Submit dissertation and signed approval form	See the Graduate and Professional School calendar for deadlines for each semester *Approval:* Advisory Committee and WMHS Program Chair

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

Appendix A

REQUIRED WATER COURSES✓*

✓ F = Fall, S = Spring, Su = Summer, E = Even Years, O= Odd Years, I = Offered irregularly

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

CLIMATE		F	S	Su	I
ATMO 631	Climate Modeling				✓
GEOG 612	Applied Climatology		✓		✓
GEOG/GEOL 642	Past Climates				✓
ECOHYDROLOGY					
ECCB 620	Ecological Restoration of Wetland and Riparian Ecosystems	✓			
ECCB 635	Ecohydrology		✓		
GEOG 626	Fluvial Geomorphology				✓
GROUNDWATER & SUBSURFACE HYDROLOGY					
BAEN 674	Vadose Zone Hydrology		✓O		
BAEN 675	Hydrology Across Scale		✓E		
CVEN 674	Groundwater Engineering		✓		
CVEN 675	Stochastic Hydrology				✓
GEOL 614	Advanced Hydrogeology	✓			
GEOL 610	Field Methods in Hydrogeology		✓		
GEOL 625	Applied Groundwater Modeling	✓			
GEOL 689	Tracers in Hydrogeology		✓		✓
WMHS 640	Geochemistry of Natural Fresh Waters		✓		
WATERSHED HYDROLOGY					
BAEN 672	Small Watershed Hydrology	✓			
BAEN 673	Modeling Small Watersheds		✓E		
SURFACE WATER HYDROLOGY					
CVEN 627	Engineering Surface Water Hydrology	✓			
CVEN 628	Advanced Hydraulic Engineering	✓			
WATER QUALITY					
BAEN 669	Water Quality Engineering	✓			
CVEN 604	Environmental Analysis of Treatment Systems		✓O		✓
CVEN 682	Environmental Remediation of Contaminated Sites		✓		
GEOL 621	Contaminant Hydrogeology		✓		
SCSC 657	Environmental Soil and Water Science		✓		

SCSC 658	Watershed and Water Quality Management		✓O		
OCNG 650	Aquatic Microbial Ecology				✓
WATER MANAGEMENT, PLANNING, AND ECONOMICS		**F**	**S**	**Su**	**I**
AGEC 606	Water Resource Economics		✓E		
CVEN 664	Water Resources Engineering Planning and Management		✓		
CVEN 665	Water Resources Systems Engineering		✓		
PSAA 624	Water Policy and Management	✓O			
RENR 662	Water and Environmental Law		✓		
PUBLIC HEALTH					
PHEO 605	Chemical Hazard Exposure	✓			
PHEO 675	Water and Environmental Public Health		✓		
PHEO 676	Environmental Sustainability and Public Health	✓			

*Additional water courses, if offered:

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

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

Appendix B

Required Research Methods and Statistics Courses✓*

✓ F = Fall, S = Spring, Su = Summer, E = Even Years, O= Odd Years, I = Offered irregularly

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

METHODS COURSES		F	S	Su	I
AGEC 607	Research Methodology		✓		
BUSH 631	Quantitative Methods in Public Management I	✓			
BUSH 632	Quantitative Methods in Public Management II				✓
CARC 601	Foundations of Research in Planning and Design	✓			
CARC 602	Research Methods in Planning and Design		✓		
EPSY 636	Techniques of Research	✓			
GEOG 611	Geographical Research Design		✓		
PLAN 604	Planning Methods I	✓			
PLAN 613	Planning Methods and Techniques		✓		
SOCI 623	Measurement of Sociological Parameters	✓			
SCSC 689	Field and Laboratory Methods in Soil Physics		✓		
URSC 641	Analytic Methods in Landscape and Urban Research	✓			

+Any other methods course relevant to student's research

STATISTICS COURSES		F	S	Su	I
ATMO 632	Statistical Methods in Climate Research	✓			
BAEN 662	Statistical Methods in Biological and Agricultural Engineering		✓		
STAT 601	Statistical Analysis	✓			
STAT 651	Statistics in Research I	✓	✓	✓	
STAT 652	Statistics in Research II	✓	✓		
STAT 653	Statistics in Research III		✓		
STAT 626	Methods in Time Series Analysis			✓	
SCSC 663	Applied Spatial Statistics				✓

+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

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

Appendix C

POSSIBLE ELECTIVES✓*

✓ F = Fall, S = Spring, Su = Summer, E = Even Years, O= Odd Years, I = Offered irregularly

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

BIOPHYSICAL SCIENCES		F	S	Su	I
ATMO 629	Climate Change		✓		
BAEN 665	Design of Biological Waste Treatment Systems		✓		
ECCB 622	Biogeochemistry of Terrestrial Ecosystems		✓		
SCSC 619	Molecular Methods for Microbial Characterization	✓			✓
SCSC 650	Mode of Action and Environmental Fate of Herbicides		✓O		
ECONOMICS, LAW, MANAGEMENT, PLANNING, AND POLICY					
AGEC 604	Natural Resource Economics		✓		✓
ECCB 671	Ecological Economics		✓		
RENR 660	Environmental Impact Analysis for Renewable Natural Resources		✓		✓
PLAN 641	Problems of Environmental Planning Administration	✓			
SOCI 616	Political Sociology	✓O			
INFORMATICS AND GEOGRAPHIC INFORMATION SYSTEMS					
BAEN 651	Geographic Information Systems	✓			
BAEN 652	Advanced Topics in Geographic Information Systems		✓		
CVEN 658	Civil Engineering Applications of GIS	✓	✓		
GEOG 651	Remote Sensing for Geographical Analysis	✓	✓		
GEOG 660	Applications in GIS	✓	✓		
GEOG 661	Digital Image Processing and Analysis		✓		
GEOG 665	GIS-Based Spatial Analysis and Modeling	✓	✓		
GEOG 695	Frontiers in Geographic Information Science	✓	✓	✓	
PLAN 625	GIS in Landscape and Urban Planning	✓	✓		
PLAN 626	Advanced GIS in Landscape Architecture and Urban Planning		✓		
ECCB 644	Remote Sensing of the Environment	✓			

*Additional elective courses, if offered:

- GEOG 666 Coastal Geomorphology
- GEOL 635 Engineering Geology
- GEOL 641 Environmental Geochemistry
- SCSC 615 Reclamation of Drastically Disturbed Lands
- SCSC 637 Environmental Microbiology
- POLS 645 Politics, Policy and Administration

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

Appendix D

WMHS Faculty

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

Name	Department	College
Anthony Cahill	Civil & Environmental Engineering (CVEN)	Engineering
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
Francisco Olivera	Civil & Environmental Engineering (CVEN)	Engineering
Franco Marcantonio	Geology & Geophysics (GEPL)	Arts & Sciences
Gabriel Eckstein	School of Law	
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	
Kelly Brumbelow	Multidisciplinary Engineering	Engineering
Kung-Hui Chu	Civil & Environmental Engineering (CVEN)	Engineering
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
Robert Knight	Rangeland, Wildlife & Fisheries Management (RWFM)	Agriculture & Life Sciences
Ronald Kaiser	Rangeland, Wildlife & Fisheries Management (RWFM)	Agriculture & Life Sciences
Salvatore Calabrese	Biological & Agricultural Engineering (BAEN)	Agriculture & Life Sciences
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

Other interested WMHS Faculty

Name	Department	College
Brianna Wyatt	Soil & Crop Sciences (SCSC)	Agriculture & Life Sciences
Bruce McCarl	Agricultural Economics (AGEC)	Agriculture & Life Sciences
Diane Boellstorff	Soil & Crop Sciences (SCSC)	Agriculture & Life Sciences
Fouad Jaber	Biological & Agricultural Engineering (BAEN)	Agriculture & Life Sciences
Garret McKay	Civil & Environmental Engineering (CVEN)	Engineering
Ignacio Rodriguez	Ocean Engineering (OCEN)	Engineering
Maria Sanchez Flores	Texas Water Resources Institute (TWRI)	Agriculture & Life Sciences
Raghavan Srinivasan	Biological & Agricultural Engineering (BAEN)	Agriculture & Life Sciences
Sreeram Vaddiraju	Chemical Engineering	Engineering
Suresh Pillai	Food Science & Technology (FSTC)	Agriculture & Life Sciences