

WATER RESOURCES MANAGEMENT, MS

REQUIREMENTS

MINIMUM GRADUATE SCHOOL REQUIREMENTS

Review the Graduate School minimum degree requirements (<https://guide.wisc.edu/graduate/#requirements>) and policies (<https://guide.wisc.edu/graduate/#policies>), in addition to the program requirements listed below.

MAJOR REQUIREMENTS

MODE OF INSTRUCTION

Face to Face	Evening/ Weekend	Online	Hybrid	Accelerated
Yes	No	No	No	No

Mode of Instruction Definitions

Accelerated: Accelerated programs are offered at a fast pace that condenses the time to completion. Students typically take enough credits aimed at completing the program in a year or two.

Evening/Weekend: Courses meet on the UW-Madison campus only in evenings and/or on weekends to accommodate typical business schedules. Students have the advantages of face-to-face courses with the flexibility to keep work and other life commitments.

Face-to-Face: Courses typically meet during weekdays on the UW-Madison Campus.

Hybrid: These programs combine face-to-face and online learning formats. Contact the program for more specific information.

Online: These programs are offered 100% online. Some programs may require an on-campus orientation or residency experience, but the courses will be facilitated in an online format.

CURRICULAR REQUIREMENTS

Requirement Detail

Minimum Credit Requirement	45 credits
Minimum Residence Credit Requirement	16 credits
Minimum Graduate Coursework Requirement	23 credits must be graduate-level coursework. Refer to the Graduate School: Minimum Graduate Coursework (50%) Requirement policy: https://policy.wisc.edu/library/UW-1244 (https://policy.wisc.edu/library/UW-1244/).
Overall Graduate GPA Requirement	3.00 GPA required. Refer to the Graduate School: Grade Point Average (GPA) Requirement policy: https://policy.wisc.edu/library/UW-1203 (https://policy.wisc.edu/library/UW-1203/).

Other Grade Requirements Grades of BC or C are not typically accepted toward program requirements unless the grade is allowed by the student's faculty advisory committee and the program chair. Grades of BC and C may not be used in the area specialty category. A maximum of 3 credits graded S may be counted toward program requirements if approved by the student's faculty advisory committee and the program chair. Courses that are audited or graded pass/fail or credit/no credit will not count toward program requirements.

Assessments and Examinations All students must hold an evaluation and guidance conference with their faculty advisory committee, preferably no later than their third semester in the program.

Language Requirements No language requirements.

REQUIRED COURSES

Code	Title	Credits
Breadth Requirements		
Category A: Natural Science & Technology (see course list below)		9
Category B: Water Resources Institutions & Public Decision-Making Processes (see course list below)		9
Category C: Analytical & Design Tools in Water Resources (see course list below)		6
Area of Specialty		15
Students choose courses, in the 300–999 range, in a cohesive area of study pertaining to their intended career path. This is coursework required for completion of the degree. At least nine credits must be from UW-Madison.		
Interdisciplinary Group Practicum		
ENVR ST/ CIV ENGR/ URB R PL 718	Water Resources Management Practicum Planning Seminar II	2
ENVR ST/ CIV ENGR/ URB R PL 719	Water Resources Management Summer Practicum	4
Total Credits		45

Category A: Natural Science & Technology

Students choose any biological sciences and/or physical sciences courses in the 300–999 range. This course list is not meant to be all-inclusive. Students are not restricted to the courses listed here. This is a sample of appropriate courses for this category that are offered through various departments/programs. At least three credits must be from UW-Madison.

Category B: Water Resources Institutions & Public Decision-Making Processes

Students choose any social sciences and/or arts & humanities courses in the 300–999 range. This course list is not meant to be all-inclusive. Students are not restricted to the courses listed here. This is a sample of appropriate courses for this category that are offered through various departments/programs. At least three credits must be from UW-Madison.

Category C: Analytical & Design Tools in Water Resources

Students choose any measurement/analysis/tools/methods courses in the 300–999 range. This course list is not meant to be all-inclusive. Students are not restricted to the courses listed here. This is a sample of appropriate

courses for this category that are offered through various departments/programs. At least three credits must be from UW-Madison.

Category A: Natural Science & Technology courses

Code	Title	Credits
AGROECOL/ ENVIR ST 724	Agroecosystems and Global Change	3
ATM OCN/ PLANTSCI 532	Environmental Biophysics	3
ATM OCN/BOTANY/ CIV ENGR/ ENVIR ST/GEOSCI/ ZOOLOGY 911	Limnology and Marine Science Seminar	1
BOTANY 330	Algae	3
BOTANY/ F&W ECOL 402	Dendrology: Woody Plant Identification and Ecology	3
BOTANY/ENVIR ST/ F&W ECOL/ ZOOLOGY 516	Conservation Biology	3
BOTANY/GEOG 338	Environmental Biogeography	3
BOTANY/ ZOOLOGY 725	Ecosystem Concepts	3
BSE 571	Small Watershed Engineering	3
BSE/CIV ENGR/ SOIL SCI 372	On-Site Waste Water Treatment and Dispersal	2
BSE/ENVIR ST 367	Renewable Energy Systems	3
CIV ENGR 310	Fluid Mechanics	3
CIV ENGR 311	Hydroscience	3
CIV ENGR 320	Environmental Engineering	3
CIV ENGR 415	Hydrology	3
CIV ENGR 500	Water Chemistry	3
CIV ENGR 618	Special Topics in Hydraulics and Fluid Mechanics	1-3
CIV ENGR 619	Special Topics in Hydrology	1-3
CIV ENGR/ ENVIR ST/ URB R PL 717	Water Resources Management Practicum Planning Seminar I	1
ENVIR ST 901	Graduate Orientation Seminar	1
ENVIR ST/ F&W ECOL/ ZOOLOGY 360	Extinction of Species	3
ENVIR ST/ GEOG 339	Environmental Conservation	4
ENVIR ST/ GEOSCI 411	Energy Resources	3
ENVIR ST/ LAND ARC 361	Wetlands Ecology	3
ENVIR ST/ POP HLTH 471	Introduction to Environmental Health	3
ENVIR ST/ SOIL SCI 324	Soils and Environmental Quality	3
ENVIR ST/ SOIL SCI 575	Assessment of Environmental Impact	3
ENVIR ST/ ZOOLOGY 315	Limnology-Conservation of Aquatic Resources	2
ENVIR ST/ ZOOLOGY 510	Ecology of Fishes	3

ENVIR ST/ ZOOLOGY 511	Ecology of Fishes Lab	2
GEOG 342	Geography of Wisconsin	3
GEOG/GEOSCI 420	Glacial and Pleistocene Geology	3
GEOSCI 875	Advanced Topics in Geology	1-3
GEOSCI/G L E 627	Hydrogeology	3-4
LAND ARC 668	Restoration Ecology	3
SOIL SCI 301	General Soil Science	3
SOIL SCI 621	Soil and Environmental Chemistry	3
ZOOLOGY 316	Laboratory for Limnology- Conservation of Aquatic Resources	2-3
ZOOLOGY 955	Seminar-Limnology	1

Category B: Water Resources Institutions & Public Decision-Making Processes courses

Code	Title	Credits
A A E/ECON/ ENVIR ST 343	Environmental Economics	3-4
A A E/ECON/ ENVIR ST/ URB R PL 671	Energy Economics	3
A A E/ECON/ F&W ECOL 531	Natural Resource Economics	3
A A E/ENVIR ST/ POP HLTH/ PUB AFFR 881	Benefit-Cost Analysis	3
ANTHRO 477	Anthropology, Environment, and Development	3
C&E SOC 375	Special Topics	1-4
C&E SOC/CURRIC/ ENVIR ST 405	Education for Sustainable Communities	3
C&E SOC/SOC 541	Environmental Stewardship and Social Justice	3
C&E SOC/SOC/ URB R PL 617	Community Development	3
CIV ENGR/ ENVIR ST/ URB R PL 717	Water Resources Management Practicum Planning Seminar I	1
CSCS 460	Civil Society and Community Leadership	3
ECON/ENVIR ST/ POLI SCI/ URB R PL 449	Government and Natural Resources	3-4
ENGL/ ENVIR ST 305	Rhetoric, Science, and Public Engagement	3
ENVIR ST 349	Climate Change Governance	3
ENVIR ST 402	Special Topics: Social Perspectives in Environmental Studies	1-4
ENVIR ST 901	Graduate Orientation Seminar	1
ENVIR ST/ F&W ECOL 515	Natural Resources Policy	3
ENVIR ST/ GEOG 337	Nature, Power and Society	3
ENVIR ST/ GEOG 339	Environmental Conservation	4

ENVIR ST/ GEOG 439	US Environmental Policy and Regulation	3-4	CIV ENGR 515	Hydroclimatology for Water Resources Management	3
ENVIR ST/HISTORY/ LEGAL ST 430	Law and Environment: Historical and Contemporary Perspectives	3	CIV ENGR/ ENVIR ST/ GEOG 377	An Introduction to Geographic Information Systems	4
ENVIR ST/JOURN/ LSC 823	Science and Environment Communication	3	CIV ENGR 516	Hydrologic Data Analysis	3
ENVIR ST/ PHILOS 441	Environmental Ethics	3-4	CIV ENGR/ ENVIR ST/ LAND ARC 556	Remote Sensing Digital Image Processing	3
ENVIR ST/POLI SCI/ PUB AFFR 866	Global Environmental Governance	3	ECON/PUB AFFR/ URB R PL 734	Regional Economic Problem Analysis	3
ENVIR ST/ SOIL SCI 575	Assessment of Environmental Impact	3	ENVIR ST/ F&W ECOL/G L E/ GEOG/GEOSCI/ LAND ARC 371	Introduction to Environmental Remote Sensing	3
ENVIR ST/ URB R PL 843	Land Use Policy and Planning	3	ENVIR ST/GEOG/ LAND ARC/ URB R PL 532	Applications of Geographic Information Systems in Planning	3
ENVIR ST/ URB R PL 865	Water Resources Institutions and Policies	3	ENVIR ST/ LAND ARC/ SOIL SCI 695	Applications of Geographic Information Systems in Natural Resources	3
ENVIR ST/ URB R PL 917	Public Participation for Planning and Policy Making	3	ENVIR ST/ SOIL SCI 575	Assessment of Environmental Impact	3
GEOG 340	World Regions in Global Context	3	F&W ECOL/STAT 571	Statistical Methods for Bioscience I	4
ISY E/M H R 729	Behavioral Analysis of Management Decision Making	3	F&W ECOL/ STAT 572	Statistical Methods for Bioscience II	4
INTER-HE 801	Special Topics in Human Ecology	1-3	GEOG 378	Introduction to Geocomputing	4
JOURN 566	Communication and Public Opinion	4	GEOG 500	Qualitative Strategies in Geography	3
LAW 845	Water Rights Law	2-3	GEOG 579	GIS and Spatial Analysis	4
LAW 848	Introduction to Environmental Law	3	GEOG 970	Seminar in Geographic Information Science	1-3
LAW/URB R PL 830	Land Use Controls	3	GEOSCI/G L E 627	Hydrogeology	3-4
LSC 560	Scientific Writing	3	GEOSCI/G L E 724	Groundwater Flow Modeling	3
POLI SCI/ PUB AFFR 871	Public Program Evaluation	3	M H R 728	Bargaining, Negotiating and Dispute Settlement for Managers	3
POLI SCI/ PUB AFFR/ URB R PL 874	Policy-Making Process	3	PUB AFFR 818	Introduction to Statistical Methods for Public Policy Analysis	3
POLI SCI/ PUB AFFR/ URB R PL 878	Public Management	3	PUB AFFR 819	Advanced Statistical Methods for Public Policy Analysis	3
PUB AFFR 974	Topics in Public Affairs	3	REAL EST/ URB R PL 720	Urban Economics	3
URB R PL 590	Contemporary Topics in Urban and Regional Planning	1-3	SOC WORK/ URB R PL 721	Methods of Planning Analysis	3
URB R PL 601	Site Planning	3	STAT 301	Introduction to Statistical Methods	3
URB R PL 731	Introduction to Regional Planning	3	URB R PL 841	Urban Functions, Spatial Organization and Environmental Form	2-3
URB R PL 741	Introduction to Planning	3			
URB R PL 841	Urban Functions, Spatial Organization and Environmental Form	2-3			

Category C: Analytical & Design Tools in Water Resources courses

Code	Title	Credits
A A E/ENVIR ST/ POP HLTH/ PUB AFFR 881	Benefit-Cost Analysis	3
BSE 571	Small Watershed Engineering	3
CIV ENGR 310	Fluid Mechanics	3
CIV ENGR 415	Hydrology	3
CIV ENGR 416	Water Resources Systems Analysis	3