Water Resources (Minor)

The interdisciplinary, interdepartmental graduate minor in water resources is designed for students majoring in the many disciplines of natural resources, science, engineering, technology, and social sciences that are relevant to water resources. The minor exposes students to water resources courses and faculty members within and outside their major fields of study.

The graduate minor in water resources (WR) requires successful completion ("B-" or better in each individual WR course, GPA of 3.0 or better across all WR courses counted toward the minor) of at least 9 credits of WR courses chosen from the lists below. At least 3 of the 9 credits (for M.S. students) or 6 of the 9 credits (for Ph.D. students) must be from outside the student's major department. For M.S. students (not Ph.D. students), up to 3 credits at the 400-level may be included if these credits are from outside the student's major department. For students earning an M.S. before enrolling in a Ph.D. program, courses taken to satisfy a WR minor in the M.S. program can not be counted toward a WR minor in the subsequent Ph.D. program. However, WR courses taken during the M.S. program may count toward a WR minor in the subsequent Ph.D. program if the M.S. program did not include a WR minor.

Master's Minor Requirement

Code	Title	Hours
Required Courses		**9**
See "Focus Areas" listed below [1]		
Total Hours		**9**

[1]
- At least 3 credit hours must be from outside major

Doctoral Minor Requirements

Code	Title	Hours
Required Courses		**12**
See "Focus Areas" listed below [2]		
Total Hours		**12**

[2]
- At least 6 credit hours must be from outside major

Minor Focus Areas

Hydrological and Meteorological Aspects of Water Resources

Code	Title	Hours
BAE 502	Instrumentation for Hydrologic Applications	3
BAE 577	Wetlands Design and Restoration	3
BAE 581	Open Channel Hydraulics for Natural Systems	3
BAE 583	Stream Corridor 3 Es: Ecohydraulics, Engineering and Ethics	3
BAE 584	Introduction to Fluvial Geomorphology	3
CE 584	Hydraulics Of Ground Water	3
CE 586	Engineering Hydrology	3
CE 607	Water Resource and Environmental Engineering Seminar	1
FOR 420/520/ NR 420/520	Watershed and Wetlands Hydrology	4
MEA 455	Micrometeorology	3
MEA 481	Geomorphology: Earth's Dynamic Surface	3
MEA 485	Introduction to Hydrogeology	3
MEA 585	Physical Hydrogeology	3
MEA 715	Dynamics of Mesoscale Precipitation System	3
SSC 470/570	Wetland Soils	3
SSC 511	Soil Physics	4

Water Quality Aspects of Water Resources

Code	Title	Hours
BAE 473	Introduction to Hydrologic and Water Quality Modeling	3
BAE/SSC 573	Introduction to Hydrologic and Water Quality Modeling	3
CE 585	Principles of Surface Water Quality Modeling	3
MEA 760	Biogeochemistry	3
MEA 763	Isotope Geochemistry	3
MEA 785	Chemical Hydrogeology	3
SSC 442	Soil and Environmental Biogeochemistry	3
SSC 521	Soil Chemistry	3

Biological and Ecological Aspects of Water Resources

Code	Title	Hours
BAE 472/572	Irrigation and Drainage	3
BAE 575	Design of Structural Stormwater Best Management Practices	3
BAE 578	Circular Approach to Manure Management	3
BAE 580	Introduction to Land and Water Engineering	3
CE 484	Water Supply and Waste Water Systems	3
CE 571	Physical Principles of Environmental Engineering	3
CE 574	Chemical Principles of Environmental Engineering	3
CHE 575	Advances in Pollution Prevention: Environmental Management for the Future	3
CS/HS/SSC/TOX 725	Pesticide Chemistry	1
CS/HS/SSC/TOX 727	Pesticide Behavior and Fate In the Environment	2
NR 521	Wetland Science and Management	3
SSC 562	Environmental Applications Of Soil Science	3

Legal, Institutional, and Economic Aspects of Water Resources

Code	Title	Hours
ECG 515	Environmental and Resource Policy	3
ET 460	Practice of Environmental Technology	3
LAR 430	Site Planning	3
NR 460	Renewable Natural Resource Management and Policy	3

NR 571	Current Issues in Natural Resource Policy	3
NR 484	Environmental Impact Assessment	4
PA 550	Environmental Policy	3

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