

WATER AND CLIMATE, UNDERGRADUATE MICROCREDENTIAL

A microcredential is a digital badge students earn by completing a focused set of coursework that builds specific skills and knowledge. Smaller than a minor, certificate, or degree, microcredentials are narrower in scope and typically consist of 6 to 12 credits. They are designed to support academic and career goals, clearly communicate mastered skills and competencies, and help students stand out in a competitive job market.

The **Water and Climate Microcredential** combines competency-based and traditional learning objectives to equip students with practical skills in quantitative analysis of physical and socioeconomic dimensions of environmental systems at the nexus between water and climate. The program prepares the students to analyze and interpret heterogeneous data and communicate the results to clients and decision makers in various professional settings, including consulting firms, government organizations, and public policy institutions. Specifically, the cluster will provide Career Readiness skills, as defined by the National Association of Colleges and Employers, in career and self-development, communication, critical thinking, and technology.

Credits and Courses

Code	Title	Credits
Required		
ATM SCI 240	Introduction to Meteorology	4
FRSHWTR 392	Water, Energy, Food, and Climate	3
Electives		
Choose one elective course from this list:		3-4
ATM SCI 250	Introduction to Climate Science	
ATM SCI 480	The General Circulation and Climate Dynamics	
GEOG 310	General Climatology	
Total Credits		10-11

The credits in this microcredential can also be used toward the requirements of the Freshwater Sciences, BS (<https://catalog.uwm.edu/freshwater-sciences/freshwater-sciences-bs/>) degree.

Badging

Upon completion of a microcredential, your achievement is recognized through digital badging. You receive a digital badge that represents the skills and competencies you've gained, which you can share on LinkedIn, personal websites, or other professional platforms to showcase your strengths to employers.

A microcredential is the coursework you complete, while the badge is how that accomplishment is displayed and shared. After completing all required credits, you will submit a form to have your badge awarded and the microcredential added to your transcript.

Admission Requirements

Current UWM students in degree or certificate programs and non-degree or special students enrolling at UWM solely for a credit-bearing

microcredential are eligible. There are no additional admission or eligibility requirements, but some courses do have prerequisites that must be completed prior to enrolling in those classes.

Water and Climate Microcredential Learning Outcomes

Upon completion of the Water and Climate Microcredential, students will:

- **Apply Versatile Data Analysis Methods:** Students will learn to apply various methods for visualizing, interpreting, and analyzing environmental and social data, including quantitative techniques such as regression analysis, as well as qualitative, conceptual modeling approaches.
- **Gain Hands-on Experience:** Through research assignments, students will gain practical experience that directly applies to careers in water and climate.
- **Demonstrate Modeling Proficiency:** Students will become proficient in designing conceptual models of coupled climatic and hydroclimatic phenomena using a combination of data-driven and physics based methodologies.