

# Water Resources, Certificate

LAWATRCERT

Water resources are irreplaceable and under stress from population growth and climate change. Management of these resources is increasingly in demand from many perspectives. Acquire the fundamental knowledge and skills for managing this vital resource.

## Description

The certificate program in water resources covers topics related to hydrologic science and their application to water resources management. The sequence of classes offered through the certificate program builds from a foundation in geological sciences up to water policy and design aspects of hydrology, as selected by the student.

## At a glance

- **College/School:** [The College of Liberal Arts and Sciences](#)
- **Location:** [Tempe](#)

## Program requirements

[2024 - 2025 Certificate Map](#)

[Certificate Map \(Archives\)](#)

The certificate requires 16 credit hours. At least 12 credit hours must be completed in upper-division coursework and at least nine credit hours must be completed at ASU. At least six upper-division hours in the certificate must be completed in courses offered by The College of Liberal Arts and Sciences. A grade of "C" (2.00 on a 4.00 scale) or higher is required for each course used to fulfill a certificate requirement.

### Required Courses -- 10 credit hours

[GLG 108](#) / [SOS 182: Water Planet \(SQ\)](#) (4)

[GLG 327 / SOS 374: Earth's Critical Zone](#) (3)

[GLG 470: Hydrogeology](#) (3)

### **Electives -- 6 credit hours**

[CEE 441: Water Resources Engineering](#) (3)

[GLG 325 / BIO 325 / CHM 385: Oceanography](#) (3)

[GLG 362: Geomorphology](#) (3)

[GLG 471: Hydrology](#) (3)

[GLG 481: Geochemistry](#) (3)

Prerequisite courses may be needed in order to complete the requirements of this certificate.

## **Enrollment requirements**

A student pursuing an undergraduate certificate must be enrolled as a degree-seeking student at ASU. Undergraduate certificates are not awarded prior to the award of an undergraduate degree. A student already holding an undergraduate degree may pursue an undergraduate certificate as a nondegree-seeking graduate student.

## **Career opportunities**

With water resources jobs increasing at a rate faster than other job outlooks (up to 6% growth between 2022 and 2032, well above the national average of 2.8%, U.S. Bureau of Labor Statistics), the demand for individuals with industry-specific skills is clear.

Students who earn a certificate in water resources can advance their career and become more marketable to employers. Exciting career opportunities in this field exist within government agencies, private sector consulting, engineering firms and nonprofit organizations, though most career areas do require more training than a certificate alone can provide.

Career opportunities include:

- hydrologist
- soil and water conservationist
- water or wastewater engineer
- water resources technician

Sample career settings include:

- environmental industry
- governmental agencies
- nonprofit organizations
- private voluntary organizations

- regulatory agencies
- utilities

## Contact information

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