

Atmospheric Sciences, Certificate

LAATMSCERT

Gain extensive knowledge of the study and practice of meteorology and climatology. Prepare to become even more competitive for positions in your primary field of study with intersections in meteorology.

Description

Students in the atmospheric sciences certificate program gain a focused understanding of weather, climate and the various related methods of measurement and instrumentation. The coursework is designed to give students the knowledge and skill set necessary for approaching meteorology-related programs through the lens of their primary field of study.

The certificate program's curriculum is also associated with the requirements for certification as a meteorologist by the National Weather Service. By completing the atmospheric sciences certificate and the BS program in geography with a concentration in meteorology-climatology, students acquire geographic information systems expertise and meteorological instrumentation skills required for national-level certification with the National Weather Service.

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 19 credit hours with a "C" (2.00 on a 4.00 scale) or higher. At least 12 of the 19 credit hours must be upper-division coursework.

Required Courses -- 16 credit hours

GPH 213: Climate and Weather (SG) (3)

GPH 215: Climate and Weather Laboratory (SG) (1)

GPH 412: Physical Meteorology (3)

GPH 413: Meteorological Instruments and Measurement (3)

GPH 414: Climate Change (G) (3)

MAT 275: Modern Differential Equations (MA) (3)

Upper-Division Elective (choose one) -- 3 credit hours

GIS 311: Geographic Information Science III (CS) (4)

GIS 341: Cartography and Georepresentation (CS) (3)

GIS 351: Air Photo Interpretation (3)

GPH 314: Global Change (HU & G) (3)

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

Enrollment requirements

Applicants must have completed GPH 111 Introduction to Physical Geography, MAT 271 Calculus with Analytic Geometry II, and PHY 121 University Physics I: Mechanics with a grade of "C" or better (scale is 4.00 = "A").

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

A certificate in atmospheric sciences is a valuable addition to a degree for students looking for a career in which understanding weather systems could be beneficial, including career fields related to sustainability, resource management and more.

When combined with a BS in geography with a concentration in meteorology-climatology, students earning the certificate in atmospheric sciences are prepared for careers as meteorologists, such as broadcast meteorologists with the National Weather Service. They are also prepared to continue their studies for an advanced degree.

Contact information

[Schedule an advisor appointment](#)

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