Atmospheric Sciences, Certificate

LAATMSCERT

Are you fascinated by weather? Gain extensive knowledge of the study and practice of meteorology and climatology to become competitive for positions in your primary field of study that are related to 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 meteorological-related programs through the lens of their primary field of study.

The curriculum of the certificate program is also associated with the requirements for certification as a meteorologist by the National Weather Service. Through completion of both the atmospheric sciences certificate and the BS program in geography with a concentration in meteorology-climatolgy, students acquire the skills in GIS and meteorological instrumentation required for national-level certification with the National Weather Service.

At a Glance

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

Program Requirements

[Certificate Map (Archives)](#)
[2021 - 2022 Certificate Map](#)
The certificate requires 21 credit hours with a "C" (2.00 on a 4.00 scale) or higher. At least 12 of the 21 credit hours must be upper-division coursework.

**Required Courses -- 18 credit hours**

- **GPH 212: Introduction to Meteorology (SQ)** (3)
- **GPH 213: Climate and Weather (SG)** (3)
- **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 -- 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)

Depending on a student's undergraduate program of study, 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 where 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 those with the National Weather Service, broadcast meteorologists, or to continue on their studies for an advanced degree.
Contact Information

Schedule an advisor appointment
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