

AMS Programs in Education and Training

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American Meteorological Society

Strategic Goals: Centennial Update

(Adopted by the AMS Council on 6 January 2019)



Two of the nine strategic goals:

- To accelerate the development and enhance the utility of applications, products, and services that leverage weather, water, and climate science
- To build knowledge of the atmospheric and related sciences among varied audiences

Precollege Teacher Training

The AMS Education Program provides professional development programs for precollege teachers.

The approach is to increase teacher knowledge base so they are more comfortable teaching these subjects.

In-person workshops:

- Project ATMOSPHERE
- The Maury Project

Distance learning semester-long courses:

- Datastreme Atmosphere
- DataStreme Earth's Climate System
- Datastreme Ocean

Courses offered in partnership with California University of Pennsylvania (CalU)



Precollege Teacher Training

All five teacher professional development programs:

- Focus on using real-time data in the classroom
- Provide graduate credits through CalU
- Can be used by teachers to obtain the Certified AMS Teacher (CAT) microcredential which can be valuable to teachers in promotion and tenure

The courses do have tuition fees associated with them (currently \$450), but those are kept as low as possible through use of grant funds and corporate sponsorships, and some teachers receive scholarships to cover the cost.

To date, over 22,000 teachers have completed professional development courses, and over 150,000 teachers have been trained in peer workshops.



Short Courses

In-person short courses:

One- to two-day short courses are offered in conjunction with some AMS scientific conferences, and there are often several offered at the Annual Meeting.



Virtual short courses:

Similar in scope to the in-person courses but offered on-line, usually as multiple half-day sessions.



Short courses are proposed and run by volunteers with AMS staff providing logistics support.

Short Courses

Examples of recent virtual short course offerings:

- Introduction to the WRF-Hydro Modeling System
- Python for Climate and Meteorology
- Introduction to the Joint Effort for Data Assimilation Integration (JEDI)
- GOES-R/JPSS Hands-on Training to Process, Display, and Analyze Satellite Data Products
- Machine Learning in Python for Environmental Science Problems
- AI and Weather Radars
- Satellite Applications Virtual Training for Students

Short Courses

Examples of short course offerings at the upcoming 102nd AMS Annual Meeting in Houston, Texas, January 2022:

- LGBTQ+ Inclusion in Extreme Climate Change Events
- Low-Cost IoT Networks for Environmental Monitoring
- Using GOES-R and JPSS Remote Sensing Capabilities to Enhance Weather, Climate, Water and Environmental Security
- Introduction to the Community WRF-Hydro Modeling System: Interactive Hands-on Tutorial
- Metpy for Quantitative Analysis of Meteorological Data
- Learning to Engage with the DOE Atmospheric Radiation Measurement (ARM) User Facility with Examples from the Houston-based TRACER Field Campaign
- Understanding Weather Radar Functional Requirements: The Foundations of Effective Radar Systems
- HPC in the Cloud: Hands-on Training
- AI in Weather Radars

Short Courses

Short courses have a registration fee that varies depending on the details of the course. In general, in-person courses have a higher fee than virtual courses because of facility costs and those courses often include a lunch and coffee breaks.

The fee can range from \$50 to over \$200 depending on all these factors, as well as the possibility that the course has received sponsorship from a company.



Webinars

Webinars are shorter online programs that are typically 60 to 90 minutes.

They cover a variety of topics, ranging from technical presentations, to career guidance, to work-life balance discussions.

Some are aimed at early career professionals while others are for the entire community.

The webinars are proposed and created by volunteers, often organized under one of the volunteer committees as a way to further the missions of that committee.

Some are freely open to all, while others are restricted as a member-only benefit to help promote the value of AMS membership.

AMS Webinars

Register:

AMS Annual Meeting Webinar Series

20 September 2021
2:00PM Eastern Time
(1800 UTC)
ametsoc.org/WebinarAnnual2022

AMS Annual Meeting Webinar Series: September Edition

Open Access

Speakers: Gina Eosco, Jen Ives, Jenn Rosen AMS and the 102nd Annual Meeting Planning Committee are excited ... [Read more](#)

September 20, 2021

45:29

AMS Webinars

Join the Local Chapter Affairs Committee for a free webinar:

Developing and Growing Your Support Network

23 August 2021
1PM Eastern Time
(1700 UTC)
ametsoc.org/WebinarSupport

Developing and Growing Your Support Network

Member Exclusive

Speaker: Tanya Peevey Usually, networking is an afterthought at worst or considered to happen naturally at ... [Read more](#)

August 23, 2021

50:16

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AMS Annual Meeting Webinar Series: August Edition

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Speakers: Andrea Bleistein, Jen Ives, Jenn Rosen Join the Annual Meeting Overall Program Committee Members ... [Read more](#)

August 18, 2021

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AMS Webinars

Join the Board on Representation, Accessibility, Inclusion, and Diversity for a free webinar:

The World Through My Eyes: I'm an Atmospheric Scientist Who Copes with a Chronic Illness

2 August 2021
2PM Eastern Time
(1800 UTC)
ametsoc.org/WebinarChronic

The World Through My Eyes: I'm an Atmospheric Scientist Who Copes with a Chronic Illness

Member Exclusive

Speakers: Alyssa Bates, Jennifer Henderson, Jennifer DeHart This is the fifth webinar of a series hosted by ... [Read more](#)

AMS Webinars

Join the Board for Early-Career Professionals for a free webinar:

Financial Forecasting: Advice for Weathering Your Money Challenges (and Future) in Your Early Career

22 July 2021
11:00AM Eastern Time
(1500 UTC)
ametsoc.org/WebinarFinancial

Financial Forecasting: Advice for Weathering Your Money Challenges (and Future) in Your Early Career

Open Access

Speakers: Christian Brown, Bill Burkey, Sam Larsen, Irene Sans, Morgan Yarker In addition to the challeng... [Read more](#)

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30 June 2021
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AMS Annual Meeting Webinar Series: An Overview - June Edition

Open Access

Speakers: Gina Eosco, Claudia Gorski, Jen Ives, Jenn Rosen Join the Annual Meeting Overall Program Committee... [Read more](#)

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Webinars

Webinars offered this year include:

- Your Roadmap to Successfully Navigating the Virtual AMS Conference
- The World Through My Eyes: I'm an Atmospheric Scientist who Copes with a Mental Illness
- Multi-Scale Modeling for Urban Environment Studies
- AMS Black History Month 2-Part Panel
- Thunderstorm Photography: Capturing the storm one 'flash' at a time
- Going through a Career Event Early in your Career
- Careers in Radar Meteorology
- Hurricanes and Climate Change: What We Know, and What We Don't
- Climate Change and Cities: Emerging Directions in Research and Action
- 2-Body Problem: Challenges Navigating Life with Married and Partnered Atmospheric Scientists
- The World Through My Eyes: I'm an Atmospheric Scientist with a Mobility Impairment
- Fostering International Collaborations with Spanish-Speaking Countries
- Financial Forecasting: Advice for Weathering Your Money Challenges (and Future) in Your Early Career
- The World Through My Eyes: I'm an Atmospheric Scientist Who Copes with a Chronic Illness
- Developing and Growing Your Support Network

Summary

Teacher training

AMS programs improve precollege education by improving the foundational knowledge of teachers in atmospheric, oceanic, and climate science.

Short courses

Provide training for professionals in the field.

Webinars

Provide useful information for students, early career professionals, or the entire community in a short format.

