Certified Climate Science Professional (CCSP) Program (as of September 2026)

1. The program

The AMS Certified Climate Science Professional (CCSP) Program was inaugurated in September 2026. The purpose of this program is to provide the community with certified climate scientists that are qualified to deliver authoritative analysis and interpretation of climate information to provide solutions to climate-related problems for those seeking climate services.

2. Certified Climate Science Professional (CCSP)

A CCSP is a physical scientist who has extensive experience and knowledge in the analysis of climate systems and data. The climate science professional provides authoritative information and solutions to climate-related problems. In addition, they can interpret the scientific evidence of climate change impacts on natural and man-made infrastructure using historical data and support planning efforts using climate projections.

A CCSP can provide specific analysis in several topic areas impacted by climate. They must be prepared to place any climate-related analysis in historical context using reputable data sources and physically based tools. A CCSP must be capable of providing unbiased and authoritative analyses of how the climate is affecting and affected by a range of disciplines. These include, but are not limited to, the following.

- **Historical significance of current conditions**: A focused analysis of what is happening in the context of history. The climatologist relies on statistical tools to explain the historical probability and frequency of climate events.

- **Water Resources:** Assessing climate impacts on the quality and quantity of water resources. This includes precipitation intensity, duration, and frequency (IDF) analysis, storm water design, waste and drinking water plant design, toxic holding pond design, and climate-driven changes to water quality.

- **Drought analysis:** Interpretation of key drought indices required for drought severity designations.

- **Infrastructure:** Climate impacts on built infrastructure.

- **Agriculture:** Crop optimization and plant hardiness analysis.

- **Health:** Disease vector migration, impacts of extreme heat on human health.

- **Energy:** Extreme temperature analysis for cooling, heating, and transmission system design.

- **Climate Change Analysis:** Understanding emissions scenarios and communicating uncertainty. Projected changes in precipitation, temperature, humidity, wind, and other climate parameters. Risk analysis.

- **Underserved Communities**: Impacts to the people and the way of life of underserved and indigenous communities.

3. Board of Certified Climate Science Professionals (CCSP)

This Board is a standing committee of the American Meteorological Society under the Commission on Professional Affairs. It is responsible for considering applications and making recommendations to the Commissioner for review and final decision regarding certification. The Board will consist of a minimum of twelve certified members* who do not hold elective office in the Society and who contribute their time and interest to the program. An attempt should be made to ensure that no member is professionally employed by the same organization as another member during tenure on the Board. Members are appointed by Council action for terms of three years. To ensure the fairness of the examination procedures, the Board has adopted the policy that its members will avoid conflicts of interest in the evaluation process. Members will continue to avoid such conflicts by disqualifying themselves from evaluating competitors or business associates when such relationships would interfere with their impartiality.

4. Qualifications for certification

Applicants must meet one of the following requirements and have a minimum of five years of professional-level work experience in climatology or a related field. Completion of a master's degree replaces one year of work experience, and completion of a doctoral degree replaces two years of work experience:

1. Hold a Bachelor's (or higher) degree in meteorology, climatology, or atmospheric science.

2. Hold a Bachelor's (or higher) degree in other disciplines such as geography or engineering, among others. Acceptability of degree(s) will be determined after a review of the applicant's college/university transcripts. Note: degrees in English, literature, philosophy, languages, journalism, communications, business administration, or similar disciplines would not lead to eligibility for the CCSP.

5. Procedures for certification

1) Candidates must complete an online application form. Applications will be accepted only from individuals who meet the above eligibility requirements.

2) Application to the AMS CCSP Program requires a two-step process. The first part is a written examination, which must be successfully completed before the candidate can proceed to the second part, the oral examination. To foster an anonymous, unbiased evaluation, the candidate is known throughout the written examination only by an identifying number assigned by the Chair.

   The CCSP applicant must pass a two-part written examination. The first is an "open-book" examination consisting of 15 questions (out of a pool of 18) to test the applicant's general climatological background as well as their area of specialty or expertise. Candidates will also have the option to write one of their own questions, in lieu of one of the 15, for potential addition to the test bank. These questions are subject to the same grading rubric. In the written examination process, candidates must provide

their own work and may not receive assistance from others. Any instance of plagiarism, including but not limited to the use of artificial intelligence (AI), is strictly prohibited and will result in a Code of Conduct complaint. All written answers should be in the candidate's own words. A period of 90 days is normally suggested as sufficient to complete the written part of the examination.

A climate science report is the second part of the written assignment. Candidates will be provided with two report scenarios and will choose one to complete. Effective communication skills are essential for anyone contemplating attainment of the CCSP credential.[1] A CCSP candidate must demonstrate that they possess the ability to apply their climatological knowledge beneficially to the affairs of humankind and communicate that knowledge to the public. It is essential that the CCSP be able to provide a written product that communicates effectively to any non-technical user.

Climate Science report guidelines for CCSP application

3) On receipt of the completed written examination, the Chair sends the material to three members of the Board without comment or other documentation. Board members assign a numerical score to each answer based on the following criteria:

Scientific Accuracy
Depth of Understanding
Use of Evidence
Organization & Clarity
Mechanics & Grammar
Citation/Sources

Board members then determine an overall score for the written examination in the range of 0 to 100. The report is similarly graded and given a numerical score between 0 and 100. The report is evaluated on the basis of the following criteria:

Application of Scientific Concepts
Critical Thinking and Evaluation
Use of Evidence or Case-Specific Details
Clear Argument and Organization

Equal weight is given to each of these four criteria.

To pass the written portion of the exam, the candidate must fulfill the following three steps: (1) the average score for the 15 written questions must be 70 or higher; (2) the candidate must score an average of 70 or higher on at least 9 of the 15 questions; and (3) the candidate must score an average of 70 or higher on the climate science report portion of the written material. If the outcome of the above three steps are not met, the application for CCSP will be rejected and no oral review will be conducted for that applicant. The identity of a rejected applicant will remain confidential, and the matter will be referred to the Commissioner on Professional Affairs for further consideration.

4) If the applicant achieves a passing grade on the combined written exam and report, the letter notifying them that they are qualified for an oral exam will contain a list of any questions and/or the climate report for which their aggregate score across all graders was less than 70, to assist them with preparing for the oral exam. No information on the identity of, or scoring from, individual graders will be provided.

Following the successful completion of the written examination, the Chair provides each Board member with the candidate's name and grants them access to the application materials.

5) The oral portion of the examination is conducted virtually. Commonly, the full Board participates, but a panel of at least 3 Board members is required.

6) The exam will include the following:
   - Introduction of candidate - candidate discusses their professional journey (10 minutes)
   - Discussion on exam questions where the candidate scored below a 70
   - Discussion of the climate science report
   - Ethics Questions

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All applicants are advised before the oral exam begins, the names and affiliations of the members of the Panel who will administer the exam. Any applicant may request that any member be disqualified for reasons of conflict of interest. The Chair or senior Board member of the Panel, however, reserves the final decision on all such requests.

7) Following each examination the participating members vote individually on their recommendation for each candidate. The ballot contains a statement that “To the best of his or her knowledge, the voting Board member has no conflict of interest with this applicant.” The ballot asks each grader to assess the candidate in three categories: knowledge, communications, and ethics. Grades are assigned on a scale from 1 (lowest) to 10 (highest) in each category. For each category, there is a space for remarks explaining the grade assigned. At the end of the ballot, there is a signature and date block. Certification will be recommended if the majority of graders give the candidate a score of 7 or higher in each of the three categories.

   The Chair of the Board (or alternate if the Chair has recused himself/herself from the process for a particular candidate(s) shall review the results of the Board’s vote and communicate the recommendation to the Commissioner of Professional Affairs for review and final decision. If the Commissioner deems it necessary to recuse themself from the process due to a conflict of interest or otherwise, the recommendation of the Chair (or alternate) shall constitute the final decision to be conveyed to the applicant.

8) Applicants not approved by the Board may appeal in writing within 90 days from the receipt of notice to the Executive Committee (see “Organizational Procedures of the AMS”).

9) All CCSP certificates shall be renewed upon application and payment of appropriate fees every year and completion of the required continuing professional development activities over each five-year evaluation period.

6. Re-application process

Re-application will be allowed starting one year after the date of denial of a candidate’s application if they do not pass their first attempt at the written exam. The re-applying candidate will be required to complete all aspects of the application and examination process, although optional questions will differ, a different climate science report must be submitted, and a new applicant presentation will be given at the oral examination. The candidate must follow the procedures as described in Section 5 (“Procedures for certification”) as a new applicant would.

Candidates who pass the written exam but fail their first attempt at the oral examination are eligible to retake the oral exam without being required to redo the written exam and climate report. There is a three-month waiting period before another application may be submitted, and candidates must reapply within six months of the denial date. Candidates who wish to wait more than six months to reapply will be required to complete the full application process, including the written exam, climate report, and oral exam. Candidates who fail the oral examination a second time will need to start over; please refer to the re-application process described in the preceding paragraph.

If a candidate fails either the written or oral exam more than once, the wait time for re-application increases to two years after the date of denial.

7. Fees

Please see the fee schedule.

8. Procedures for recognition of continuing professional development

One of the purposes of the CCSP program is to provide an incentive for the meteorologist's continued professional growth. In January 2004, the AMS Council approved adding a mandatory continuing professional development component to all of the Society's certification programs, to be administered by each program's respective Board. The procedures for documenting professional development activities to satisfy the requirements under the CCSP program are provided below.

The Program to Recognize Continuing Professional Development by CCSP is based on the development and maintenance of a "Professional Portfolio" by each individual CCSP. A Professional Portfolio is developed from an extensive list of activities and accomplishments related to an individual's professional career. This list was developed from input submitted by the CCSP community. Each activity is assigned a Professional Development Score (PDS). To maintain an active status, a CCSP must amass a total of 28 PDS points in a portfolio of continuing professional development during a five-year period, which must be submitted no later than the end of the fifth calendar year after the year in which the CCSP received his or her certification or the year of the most recent submission of his or her portfolio.

The list of recognized professional activities and their PDS values is provided online. A CCSPSP can review or update his or her portfolio by logging into the Certification Management System (CMS) using the username and password created in the CCSP's AMS membership profile. This website will allow the CCSP to update their portfolio by filling in the appropriate cells on a preformatted form. To protect client confidentiality, specifics of many activities will not be required. Each CCSP should keep personal records; however, that will provide tangible evidence of accomplishments in case their records are selected for audit.

Each activity listed must have occurred within the last five years. The portfolio database will be maintained at the AMS Headquarters. When a CCSP wishes to have his/her portfolio evaluated to fulfill the five-year professional development requirement, he/she initiates the submission of their current portfolio through the AMS Website. Each portfolio will be confidential. Only the filing CCSP, the Chair or designee, and appropriate AMS Headquarters staffers will have access to an individual portfolio (except in the case where a CCSP seeks an appeal). The submission of portfolios will be an automated process, adding an additional level of security to the portfolios.

The portfolio website will, for each CCSP logging into their portfolio, include a running total of the number of PDS points accumulated since the CCSP's certification was granted or the most recent portfolio submission. After a successful submission — that is, one with a portfolio containing at least 28 PDS points accumulated in the past five years — a new, clear portfolio will be initialized, and the date for the five-year professional development period will be reset.

Audits

No more than 5% of the portfolios submitted each year will be randomly selected for audit as part of the evaluation of the program. The audits are conducted in the calendar year immediately following when they are submitted. For example, up to 5% of portfolios submitted in 2018 would be randomly selected for audit in 2019. CCSPs are to submit their portfolio every five years. Submitting a portfolio more frequently than five years will increase the chance of being audited.

Outside of the random selection procedures, an audit of a CCSP's portfolio may be requested by any member of the Society. The request must be made in writing with justification to the Commissioner on Professional Affairs. The Commissioner may dismiss the request with notice and a statement of reasons to the individual making the request. If the Commissioner approves the request, such an audit would not count against the 5% cap.

Instructions for conducting an audit:

1. The Chair may delegate one board member to conduct the annual audits.
2. To initiate the process, the AMS notifies the CCSP that they have been selected for audit, along with an explanation of how the audit will be conducted.
3. No action will be required by the audited CCSP upon notification. Any questions regarding the audit by the CCSP will be referred to the Chair, who should respond within 10 days.
4. Audits should begin within 10-30 days of the CCSP's notification and be completed within 90 days.
5. Audits will be conducted with the assumption that the CCSP has truthfully and in good faith entered activities they successfully completed over the period of record. Therefore, the Chair's (or delegate's) primary audit responsibilities include:
    a. Ensuring the portfolio contains enough entries to fulfill the 28 point criteria.
    b. Ensuring there are no duplicate entries.
    c. Validating the point amount for each entry.
6. Note that the audit does not need to review every entry in the record. The audit can be completed once a minimum of 28 valid points are accounted for. If there are issues associated with items outside the core needed for 28, they can be pointed out to the CCSP for correction, but they don't need to impact the pass/fail determination.
7. If, in the opinion of the delegate, no aspects of the portfolio show cause for concern, the audit will be recorded as a PASS, and the CCSP will be notified of such.
8. If an issue or concern is identified in the course of the audit:
    a. The issue will be communicated by the Chair to the CCSP whose portfolio is being audited with a detailed explanation and an offer to work with the CCSP for a resolution.
    b. The audited CCSP will have 30 days to respond with additional information or documentation as appropriate.
    c. If the additional information satisfies the concern, the audit will be recorded as a pass, with written notification to the CCSP by the Chair.

d. If the Chair is uncertain whether the additional information satisfies the concern, the Chair will form an ad hoc committee comprised of three members of the Board to review the portfolio and all associated communications with the candidate, along with documentation provided, and provide a pass/fail recommendation with rationale to the full Board for a decision by majority vote.

9. If the Board determines that the audit result is a failure, the Board will recommend to the AMS, through the Professional Affairs Commissioner, that the CCSP be placed in Inactive status.
10. The CCSP may appeal the Inactive status decision in writing (stating the reasons for the appeal) to the AMS Executive Committee, 45 Beacon St., Boston, MA 02108-3693.

9. Maintaining the list of acceptable continuing professional development activities

The list of recognized professional activities and their PDS values provided in Table 1 will be reviewed at least annually by the CCSP Board for its relevance to the normal activities of a CCSP, and revisions will be made as appropriate. Any active CCSP can submit a request to the Chair to have a specific activity considered for inclusion on the list or to adjust the PDS point value of an existing activity. Each such request will be vetted by the CCSP Board, which may seek external review and recommendation as it feels appropriate, and a decision on each suggested change will be made by majority vote of the CCSP Board. When a rule change is made, the CCSP will be given the benefit of either the old or new rule as long as the activity was carried out prior to the end of the calendar year in which the change was made.

10. Renewal, inactive status, and reactivation

Certification is for a period of one year, and can be renewed annually for a fee. Renewals are billed by the AMS in conjunction with annual membership and subscription notices. If an individual fails to renew certification by the expiration date or fails to achieve an acceptable level of continuing professional development during the five-year period following certification or the completion of the most recent continuing professional development period, the certification will be considered Inactive.

Inactive CCSPs can't practice as CCSPs or market themselves as CCSPs. Those wishing to acknowledge their past active CCSP status on resumes may do so, but must list the years from initial certification through the date they lapsed into Inactive status.

Reactivation of an Inactive certification can be obtained under the following situations:

1) If the certification has become Inactive due to failure to pay the renewal fee, and has been Inactive for less than five years, active status can be obtained by paying the renewal fee for the inactive year(s) and the current renewal.
2) If the certification has become Inactive because insufficient continuing professional development activities or insufficient documentation had been completed in the required five-year continuing professional development period, and the certification has been Inactive for less than three years, the certification can be reactivated upon completion of sufficient continuing professional development activities in the five year period preceding the request for reactivation and with the payment of the renewal fee for the inactive year(s) and the current renewal.
3) If the individual has been inactive in the field for three or more years, or the individual's certification has been inactive for some other reason for more than three years, complete reapplication for certification may be necessary. Individuals in these circumstances should contact the Chair for guidance.

11. Appeal of inactive status

A CCSP whose certification has become Inactive through any means other than nonpayment of the renewal fee, including as the result of a review of his or her portfolio of continuing professional development, may seek an appeal of the Inactive status by written request to the Commissioner on Professional Affairs within 60 days of notification of placement on the Inactive CCSP list. The request for appeal should include all supporting documentation needed to review the request. In cases of extenuating circumstances beyond the control of the CCSP (such as a military reservist being called to active duty) Commissioner on Professional Affairs may grant an extension of active status for a one-year period. Economic hardship is not grounds for appeal by a CCSP that has been moved to Inactive status.

If a CCSP's appeal of Inactive status has been denied by the Commissioner on Professional Affairs, the CCSP may, within 90 days of notification of the denied appeal, appeal that action in writing to the Executive Committee of the Society (see Organizational Procedures of the AMS).

12. Publication of CCSP status

While the individual professional portfolios will be confidential, the AMS website will post a list of all CCSPs and their current status as “Active”, “Inactive”, or “Retired”. Each status type will be clearly defined.

13. Suspension or revocation

AMS reserves the right to suspend or revoke the right to use the CCSP Seal, if the CCSP, in the conduct of their profession, clearly fails to conduct themselves in accordance with the AMS Code of Conduct.

Any complaint that may be grounds for the suspension or revocation of the CCSP Seal shall be sent to the Society and processed through the Procedures for Implementing the AMS Code of Conduct.

*The initial board was recommended by the Commissioner of Professional Affairs and approved by AMS Council.

1 **Eloquent Science: A Practical Guide to Becoming a Better Writer, Speaker, and Atmospheric Scientist ;** © 2009-**Author** David M. Schultz; -**ISBN** 978-1-878220-91-2