

Aviation meteorology careers

Connect weather science with aviation users

Aviation meteorology connects atmospheric science with the information needs of aviation. Career interests can include observation, forecasting, weather-data systems, research or explaining weather impacts to operational teams. These are related activities, not one interchangeable job. This guide helps you select a specific interest and investigate its education, practical training and competence requirements without making weather or flight decisions. [W1, W2]

Educational review draft. Owner and subject review pending. Sources checked 27 October 2026; next review not yet scheduled.

What the work contributes

- Observe and analyse weather information within an assigned role, keeping evidence, time and uncertainty visible rather than presenting guesses as established facts.
- Turn specialist analysis into information that aviation users can understand, while preserving the limits and intended use of the product.
- Support continuity through coordination, careful records and quality checks; forecasting, observing and maintaining systems require different expertise.

An illustrative working day

Original simplified example, not a duty schedule or an operating procedure. Actual work varies by organization, operation and assigned role.

Part of the work	What a beginner should notice
Start of work	A learner reviews the assignment and available information with a supervisor, noting what is current and what remains uncertain.
Analysis or observation	A qualified colleague explains how evidence is checked. The learner supports only the tasks included in their training.
Communication	The team tailors an explanation to its intended audience without turning uncertainty into false certainty.
Review and handover	Changes, outstanding questions and learning points are recorded. A research or technical-support role may have a different daily pattern.

Keep the role boundaries clear

An aviation forecaster, weather observer, weather-systems technician and pilot using a weather briefing perform different functions. Explaining a weather product does not authorize a person to issue operational forecasts, maintain equipment or decide whether a flight is safe. An introductory weather course is not a universal professional qualification. [W1, W2]

Do you most enjoy understanding physical patterns, working with data or explaining uncertainty to others

Build your learning sequence

Use this sequence to investigate the career before committing to formal training. It is an educational exploration path, not an approved syllabus or a compulsory worldwide route.

Choose a weather related role

Compare forecasting, observation, research, data services and technical-support work. Identify the country and organization whose route you want to investigate.

Build scientific and data foundations

Develop mathematics, physics, geography, statistics and clear scientific writing at an appropriate level. Practise distinguishing a measurement from a prediction and a prediction from a decision.

Compare education with job requirements

Read the stated academic and professional preparation for the exact role. Ask which subjects, recognized qualifications and practical training are required rather than relying on a broad course title.

Investigate aviation specific competence

Ask how the employer develops, assesses and maintains the knowledge needed for its products and users. Scientific study and competence for an assigned operational duty are separate questions.

Build a safe learning portfolio

Keep short explanations of sources, uncertainty and lessons learned. Seek approved learning opportunities; do not present self-made aviation forecasts or warnings as operational products.

A worked exploration decision

Fictional example: Daniel enjoys weather maps and initially searches only for meteorologist jobs. A comparison reveals forecasting, data-analysis and instrument-support pathways. Daniel chooses two roles to investigate and asks how their subject preparation and practical assessments differ, instead of assuming one general aviation course opens every route.

Try a small learning task

Create an information-quality card using a public weather-service description, not a live flight scenario. Record who publishes it, its audience, whether it describes observations or forecasts, and what expertise would be needed to use its products. Write one sentence explaining the difference between information and an operational decision.

My question or learning task and what I will produce

Separate routes from requirements

Country examples illustrate different systems. They do not establish equivalence, transferability or your eligibility. Check the current authority, course and employer requirements for the exact role before acting.

United States example

FAA; services involve NWS and other providers • Service landscape, not a personal qualification checklist

The FAA describes aviation weather as a joint effort involving the National Weather Service, FAA and other organizations. NWS meteorologists provide tailored support to air traffic facilities, while observation services also involve automated systems and qualified personnel. Identify the actual employer and function before choosing training. [W1]

European Union framework example

EASA and the relevant competent authority • Provider competence obligation and supporting guidance

ATM/ANS.OR.B.005 requires a process to ensure personnel are trained and competent. The associated guidance for MET providers points to WMO education and competency material. This is not evidence of a single Europe-wide personal meteorology licence or an automatic qualification from any named course. [W3] This example uses EASA's March 2025 compilation; verify later amendments and national application.

Three labels to use when you compare options

Category	How to interpret the information
Regulated requirements	For EU providers within scope, organizational training and competence obligations apply. Determine the exact national, provider and role requirements; do not convert general guidance into a universal entry rule. [W3]
Employer conditions	A closed EUROCONTROL weather-operations vacancy illustrates role-specific expectations for relevant scientific study, forecaster preparation and operational experience. It is a historical example, not an open offer or a rule for every beginner. [W4]
Typical preparation	Scientific curiosity, numeracy, data literacy and clear explanation are useful starting points. They do not substitute for assessed competence or approval to issue operational products.

Ask the question that changes the decision

Ask which products or duties the role is responsible for, what education and professional preparation are accepted, and how supervised learning is assessed. Who decides that a trainee is competent for those duties, and how is that competence kept current?

My intended country and the authority or employer I will verify with

Medical, age, experience, security and work-permission questions belong with the competent authority or responsible organization. Do not use this guide to decide personal eligibility or share private records.

Plan your next step

Take one manageable action, keep its source and date, and leave unanswered questions visible. None of these exercises grants a licence, qualification, operational authority or job entitlement.

- 1 Choose one meteorology-related role and country, then identify the actual responsible organization.
- 2 Compare the academic foundation, professional training and task-specific competence separately.
- 3 Ask a provider how its learning outcome fits the intended role and what further preparation remains.
- 4 Complete the information-quality card and choose one scientific or communication skill to develop.

The most important question I still need answered

My next action and review date

Official sources and scope

All links below were checked at the stated scope on 27 October 2026. Requirements can change. These organizations do not endorse Avi Learner or this guide.

[W1] [FAA AIM 7-1: Meteorology](#)

US weather-service organizations and observation/forecast support roles.

[W2] [ICAO AFI Air Navigation Report, first edition: section 2.6](#)

2023 regional report explaining MET service purposes and aviation users.

[W3] [EASA ATM/ANS rules: training and competencies for MET providers](#)

Provider competence duty and references to WMO guidance; March 2025 compilation.

[W4] [EUROCONTROL Network Specialist \(Weather Operations\): closed vacancy](#)

Historical example of scientific, forecaster and operational role requirements.

Explore related Avi Learner pages

[Aviation meteorology explainer](#)

[Annex 3 introductory page](#)

[Training provider checklist](#)

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