

Requerimiento de Módulos de COMET

Como parte de la certificación de la OMM para los escritorios Sudamericano y Tropical, cada estudiante debe completar como mínimo **siete (7) módulos de COMET** antes de la última semana del entrenamiento. Debe completarse **un** módulo de **cada una de las categorías siguientes**:

1. **Climatology**
2. **Numerical Weather Prediction**
3. **Public Support**
4. **Satellite**
5. **Synoptic Meteorology**

Los estudiantes del escritorio tropical deben completar **dos (2)** módulos adicionales de la categoría de meteorología tropical (**Tropical Meteorology Category**). Los estudiantes del escritorio sudamericano deben completar **uno (1)** de la categoría de Meteorología Tropical (**Tropical Meteorology Category**) y uno de la categoría de Meteorología de Sudamérica (**South American Meteorology**). Se necesita una calificación de 70% para pasar. El certificado de COMET que incluye la calificación y fecha de ejecución debe ser enviado a los supervisores por correo electrónico. Se recomienda que los siete módulos sean completados para el tercer mes de entrenamiento.

ACCESO A LOS MODULOS

Los módulos se pueden completar en línea ingresando a <https://www.meted.ucar.edu/>. La página de COMET requiere la creación de una cuenta para la que Michel Davison o José Gálvez pueden ser referidos como los supervisores. La lista de módulos se presenta a continuación. Los más aplicables al entrenamiento están resaltados (†), pero es solo una sugerencia.

1. Climatology

- Climate Change and Regional Impacts
- Climate Change and Extreme Weather
- Climatology for the Operational Forecaster
- The El Niño-Southern Oscillation (ENSO) Cycle
- †ENSO and Beyond
- MJO, Equatorial Waves, and Tropical Cyclogenesis
- Introduction to Climatology
- Monitoring the Climate System with Satellites
- Introduction to Climate Models
- Introduction to Statistics for Climatology
- The Amazon Rain Forest and Climate Change
- †The Madden-Julian Oscillation Life Cycle
- The Role of the MJO in Oceanic and Atmospheric Variability
- Understanding Drought
- Using Climatological Products in Common Operations

2. Numerical Weather Prediction

- † **Adding Value to NWP Guidance**
- Effective Use of High-Resolution Models
- Effective Use of NWP in the Forecast Process: Introduction
- How Satellite Observations Impact NWP
- How Models Produce Precipitation and Clouds - version 2
- Intelligent Use of Model-Derived Products - version 2
- Model Fundamentals - version 2
- † **Operational Models Matrix: Characteristics of Operational NWP Models**
- Preparing to Evaluate NWP Models
- Ten Common NWP Misconceptions

3. Public Support

- † **Anticipating Hazardous Weather and Community Risk, 2nd Edition**
- Community Hurricane Preparedness, 2nd Edition
- Customer Impacts: Forecasting Fog and Low Stratus
- † **Flash Flood Processes**
- Hurricane Strike
- The Impact of Weather on Air Traffic Management

4. Satellite

- † **Basics of Visible and Infrared Remote Sensing**
- Creating Meteorological Products from Satellite Data
- † **Feature Identification Using Environmental Satellites**
- † **Multispectral Satellite Applications: RGB Products Explained**
- † **Polar Satellite Products for the Operational Forecaster: Microwave Analysis of Tropical Cyclones**
- Satellite Feature Identification: Blocking Patterns
- † **Satellite Feature Identification: Cyclogenesis**
- Satellite Feature Identification: Conveyor Belts
- Volcanic Ash: Observation Tools and Dispersion Models
- Volcanic Ash: Introduction
- Volcanic Ash: Volcanism
- † **Vorticity Maxima and Comma Patterns**
- Vorticity Minima and Anticommata Patterns
- WMO Regional Satellite Workshop

5. Synoptic Meteorology

- †A Convective Storm Matrix: Buoyancy/Shear Dependencies
- Dynamically Forced Fog
- EUMeTrain's Synoptic Textbook
- EUMeTrain's Manual of Synoptic Satellite Meteorology
- †Flash Flood Processes: International Edition
- Flood Forecasting Case Study: International Edition
- †Isentropic Analysis
- †Jet Streams
- †Jet Streak Circulations
- †Mesoscale Convective Systems: Squall Lines and Bow Echoes
- Nighttime Radiation and Cooling of the Lower Atmosphere
- Principles of Convection I: Buoyancy and CAPE
- Principles of Convection III: Shear and Convective Storms
- Quantitative Precipitation Forecasting Overview
- S-290 Unit 5: Temperature and Relative Humidity Relationships
- †Should Synopticians Worry About Climate?
- Skew-T Mastery
- Synoptic Weather Considerations: Forecasting Fog and Low Stratus
- Thermally-forced Circulation I: Sea Breezes
- Thermally-forced Circulation II: Mountain/Valley Breezes
- †Tropical Mesoscale Convective Systems

6. South America Meteorology

- Antarctica: Challenging Forecasts for a Challenging Environment
- VLab's Conceptual Models for Southern Hemisphere
- †Tropical-Extratropical Air Mass Interactions in South America

7. Tropical Meteorology

- †African Easterly Waves
- †Conceptual Models of Tropical Waves
- Introduction to Tropical Meteorology, 2nd Edition, Chapter 1: Introduction
- Introduction to Tropical Meteorology, 2nd Edition, Chapter 2: Tropical Remote Sensing Applications
- †Introduction to Tropical Meteorology, 2nd Edition, Chapter 3: Global Circulation
- Introduction to Tropical Meteorology, 2nd Edition, Chapter 4: Tropical Variability
- Introduction to Tropical Meteorology, 2nd Edition, Chapter 5: The Distribution of Moisture and Precipitation
- †Introduction to Tropical Meteorology, 2nd Edition: Chapter 7: Synoptic and Mesoscale Systems

- † **Introduction to Tropical Meteorology, 2nd Edition, Chapter 8: Tropical Cyclones**
- Introduction to Tropical Meteorology, 2nd Edition, Chapter 9: Observations, Analysis, and Prediction
- Topics in Tropical Meteorology
- Tropical Cyclone Intensity Analysis
- Tropical Mesoscale and Local Circulations
- † **Tropical Severe Local Storms**

Others: Aviation

- Atmospheric Dust
- Basic Terminal Forecast Strategies
- Forecasting Dust Storms - Version 2
- Forecasting Aviation Icing: Icing Type and Severity
- Fog: Its Processes and Impacts to Aviation and Aviation Forecasting
- Fog and Stratus Forecast Approaches
- Forecasting Radiation Fog
- Gap Winds
- Local Influences on Fog and Low Stratus
- Low-Level Coastal Jets
- Mountain Waves and Downslope Winds
- Radiation Fog
- Topics in Precipitation Type Forecasting
- Tropical Fog: A Look at Fog That Impacts Aviation in Guyana
- Volcanic Ash: Impacts to Aviation, Climate, Maritime Operations, and Society
- West Coast Fog
- Writing Effective TAFs
- Writing Effective TAFs in the Caribbean
- Writing TAFs for Convective Weather, 2nd Edition
- Writing TAFs for Ceilings and Visibility
- Writing TAFs for Winds and LLWS

Others: Radar

- Caribbean Radar Cases
- Caribbean Radar Products
- Satellite Feature Identification: Atmospheric Rivers
- Radar Signatures for Severe Convective Weather
- Weather Radar Fundamentals