

# African Meteorological Society

## Learning Resources for Professional Users

**Language:** AR (Arabic), EN (English), FR (French), PO (Portuguese), RU (Russian) or SP (Spanish)

**Connectivity:** Assessed as H (high), M (medium) or L (low) where H indicates that there a lot of high-resolution videos/ animations whereas L indicates fewer graphics or an offline option

Name/ title	Brief description	URL	Notes	Language	Connectivity
<b>All topics</b>					
COMET/ MetEd	MetEd is a free collection of hundreds of training resources intended for the geoscience community. Whether you're an experienced meteorologist honing existing skills or a student looking for new geoscience topics of interest, we have something for you	<a href="https://www.meted.ucar.edu/education_training/">https://www.meted.ucar.edu/education_training/</a>	Excellent quality material for a variety of levels and users. Difficulty level is indicated.	English	L-H
<b>Atmosphere and fundamentals of meteorology</b>					

NWS Education	<p>NWS Education offers a wealth of weather resources. You can explore science, safety, and citizen science programs.</p> <p>This is the US National Weather Service website and therefore has a US bias, but some material is relevant to the principles of weather and therefore applicable to the whole globe.</p> <p>Jet Stream is designed to help educators, emergency managers, or anyone interested in learning about weather and weather safety.</p>	<a href="https://www.weather.gov/education/">https://www.weather.gov/education/</a>	Good quality materials for a variety of users but not organised in a systematic way.	English	M
Introduction to Tropical Meteorology	This online textbook is a comprehensive resource for Tropical Meteorology. It is intended for use by undergraduate and early graduate students in Tropical Meteorology courses, forecasters, and others interested in the impacts of tropical weather and climate.	<a href="https://www.ucar.edu/tropical-meteorology/">Introduction to Tropical Meteorology: Table of Contents (ucar.edu)</a>	useful resource material for a variety of users. Requires registration.	English	M
<b>Climate and climate change</b>					
MetLink	Support materials for teaching weather and climate - specifically about climate change	<a href="https://www.metlink.org/resource/about-climate-change/">https://www.metlink.org/resource/about-climate-change/</a>	Excellent background materials on climate change. Not specific to Africa. Mainly text with few animations.	English	L

Planet Partners: Tackling the Climate Crisis Together (Future Learn open course)	Investigate the impact of climate change, the research being done to tackle it, and what you can do to take meaningful action.	<a href="https://www.futurelearn.com/courses/tackling-climate-crisis">https://www.futurelearn.com/courses/tackling-climate-crisis</a>	Basic Climate change. Average quality. Not specific to Africa.	English	M
Bending the Curve	This series of four short courses are based on the multidimensional aspects of the climate change along with possible solutions. These are suitable for general studies by students and people at large. The solutions to combat the effects of climate change are discussed in terms of technological innovation, ecosystem management, market mechanisms and even behaviour changes.	<a href="https://online.ucsd.edu/programs/080c48a1-70bf-439c-9eac-a02b60282209/about?gclid=EAlaIqobChMlvZ_dxtad6wIVQiQrCh0ihwWbEAYASAAEgKmbvD_BwE#courses">https://online.ucsd.edu/programs/080c48a1-70bf-439c-9eac-a02b60282209/about?gclid=EAlaIqobChMlvZ_dxtad6wIVQiQrCh0ihwWbEAYASAAEgKmbvD_BwE#courses</a>	Course covering climate change issues and policy. Long course which is not free.	English	M

Climate Change: Solutions	Explores solutions to the global climate change challenge, including mitigation, adaptation and geo-engineering,	<a href="#">Free Online Course: Climate Change: Solutions from FutureLearn   Class Central</a>	This site offers some useful courses. One of them is The Science and modelling of Climate Change. There are also some short videos in which certain basic concepts have been very nicely explained by an experienced Professor using blackboard. Physics of Greenhouse gases has been nicely explained in one such video.	English	M
<b>Observations, including remote sensing</b>					
Watching the Weather	<p>This free course, Watching the weather, describes how meteorological observations are made looking upwards from the surface of the Earth, looking downwards from satellites in space and from aircraft and balloons within the atmosphere. This international network of observations is vital for scientists and forecasters and the results impact on everyone's daily activities.</p> <p>Produced by Open Learn for the Open University it is aimed at introductory level.</p>	<a href="https://www.open.edu/openlearn/nature-environment/environmental-studies/watching-the-weather">https://www.open.edu/openlearn/nature-environment/environmental-studies/watching-the-weather</a>	Free course but requires registration. Downloadable so suitable for offline use. Suggested 10 hours to complete the course.	EN	M

Sat 24	Real time satellite imagery of Africa	<a href="http://Sat24.com">Sat24.com</a>	This site only includes satellite imagery that can be accessed and used during training and learning purposes. Source unclear and mainly operational but could provide useful resource for professional users.	English	H
Satellite Meteorology	Meteorology is an excellent topic to introduce users to geoscience, physics, chemistry and applied mathematics. Satellite Meteorology learning modules provide scientists and educators with exciting activities and hands-on tools for investigation, inquiry, analysis and stewardship.	<a href="http://cimss.ssec.wisc.edu/satmet/">http://cimss.ssec.wisc.edu/satmet/</a>	These are very good modules providing information on fundamental concepts in very simple and easy to understand words . After going through the study material and learning the basic concepts, some exercises are also provided which students can attempt to check up to what extent they have been able to grasp the knowledge given in the study material.		
<b>Observing, nowcasting and forecasting African weather systems</b>					

Basic Satellite Imagery Interpretation	Course consists of a set of tabs, each dealing with a different satellite product (Vis, IR, ...) and each illustrated by a satellite image movie covering the whole of Africa.	<a href="#">COMET / MetEd Lesson Viewer (ucar.edu)</a>	A great introduction to aspects of African meteorology observable in satellite imagery. Registration required. Drawback is that it requires good bandwidth. Linked from WMO Moodle / FFGS / Remote Sensing.	English	VH
Sat 24	Real time satellite imagery of Africa	<a href="#">Sat24.com</a>	This site only includes satellite imagery that can be accessed and used during training and learning purposes. Source unclear and mainly operational but could provide useful resource for professional users.	English	H
<b>African Climate/ Climatology/ Climate change in Africa</b>					
Africa weather and climate	The YouTube video is a 1.5 hour lesson for students on Africa's weather and climate and position of Africa's major climate regions.	<a href="https://www.youtube.com/watch?v=b4ySRVm6qwc">https://www.youtube.com/watch?v=b4ySRVm6qwc</a>	Material on Geography in the form of lectures through videos.	English	H
<b>Hydrology/ hydrometeorology/ flooding/ water resource management</b>					

<p>Basic Hydrological Sciences (International Edition)</p>	<p>Developed for an international audience with a broad background, this course is designed to address the needs of non-hydrologists who work with hydrologic data, particularly in flood forecasting. The course provides an understanding of the complex interactions between the ground, waters and atmosphere, and will prepare the student for further study in hydrologic methods and forecasting. The course is based on materials originally developed for NOAA forecasters, but adapted so that the topics presented include a variety of hydrologic forecast methods applicable to a audiences in varied locations. All units are presented in the International System of Units (SI).</p>	<p><a href="#">COMET / MetEd Lesson Viewer (ucar.edu)</a></p>	<p>Aimed at non-hydrologists. Not specific to Africa, and includes irrelevant material on ice. Registration required. Otherwise looks a pretty comprehensive starter. Link from WMO Moodle / FFGS / Hydrology</p>	<p>English</p>	
<p><b>Sector based meteorology e.g. aviation, energy</b></p>					
<p>Meteorology notes for aviators</p>	<p>Summary lecture notes from a short course on aviation meteorology in Africa</p>	<p><a href="https://www.studocu.com/row/document/east-african-school-of-aviation/aviation-meteorology/meteorology-notes/6784581">https://www.studocu.com/row/document/east-african-school-of-aviation/aviation-meteorology/meteorology-notes/6784581</a></p>	<p>A PDF covering aviation meteorology. Note: if the link doesn't connect directly, try copying and pasting the url into your browser search bar.</p>	<p>English</p>	<p>L</p>

Reporting on Climate Change	BBC Climate Course for journalists in Africa	<a href="https://bbcmediaaction.ilearn.org/course/view.php?id=242">https://bbcmediaaction.ilearn.org/course/view.php?id=242</a>	It is a very good course and deals with reporting on Climate Change. A useful feature of this course is that it provides a way of knowledge check. There are also pointers to the materials for further study by the interested persons. Concept of carbon removal has been explained with a video.		
Tourism and Climate Change	Addresses the key challenges tourism faces in context of drastic climate change.	<a href="#">Free Online Course: Tourism and Climate Change from edX   Class Central</a>	Sector specific content on climate change.	English	M