

African Meteorological Society

Learning Resources for Scientists and Researchers of Earth Sciences

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
All topics					
COMET/ MetEd	<p>MetEd is a free collection of hundreds of training resources covering all aspects of meteorology and is the most comprehensive source of training resources for meteorologists.</p> <p>Resources can be selected by topic and include individual lessons and courses.</p> <p>There is a search function to help find the most appropriate resources.</p>	https://www.meted.ucar.edu/education_training/	Aimed at undergraduates, Registration required for access to resources.	English, French, Portuguese, Spanish	L-H
Atmosphere and fundamentals of meteorology					

MSc Meteorology	Comprehensive set of 117 online lectures on (1) Atmospheric Physics, (2) Modelling of Atmospheric Processes and (3) NWP & Data Assimilation by Prof. Someshwar Das delivered to Students of M.Sc. (Atmospheric Science) at Central University of Rajasthan (2020-2021). Some of the videos also contain online practical classes on NWP.	https://www.youtube.com/channel/UCzHnrYVtsWKqK0iJGR7FVJQ	Freely available courtesy of Prof. Das.	English	H
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.	Introduction to Tropical Meteorology: Table of Contents (ucar.edu)	Useful resource material for a variety of users. Requires registration.	English	M
Tropical Synoptic Meteorology Curriculum Package	A university-level, online meteorology course package which includes an instructor's guide and model syllabus with learning objectives, free online instructional resources, case examples, questions for review or discussion, student assignments, learning activities, and guidance for online course delivery.	https://www.meted.ucar.edu/training_module.php?id=1082	Registration/enrolment is required for access to the resources.	English	M-H
Climate and climate change					

OpenLearn from the Open University: Course on Climate Change	This free course explores the basic science that underpins climate change and global warming.	https://www.open.edu/openlearn/nature-environment/climate-change/content-section-0?active-tab=description-tab	Open access – registration is optional but once the course is completed, a ‘statement of participation’ can be downloaded. Resources can be downloaded for use offline.	English	L
Observations, including remote sensing					
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.	COMET / MetEd Lesson Viewer (ucar.edu)	A great introduction to aspects of African meteorology observable in satellite imagery. Registration required. Drawback is that it requires good bandwidth.	English	H
(Numerical Weather Prediction) Modelling and related topics					

NWP Training Series Course 1: NWP Basics and Background	NWP Basics and Background, includes lessons on how the forecast is affected by the basic building blocks of model systems, such as the dynamics, physics, and assimilation. Additional lessons introduce new tools, such as downscaling of NWP model data, bias correction, and ensemble systems.	COMET / MetEd Lesson Viewer (ucar.edu)	Aimed at forecasters but suitable for scientists who are new to NWP	English	M
Observing, nowcasting and forecasting African weather systems					
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.	Introduction to Tropical Meteorology: Table of Contents (ucar.edu)	Aimed at undergraduates, Registration required.	English	M
Hydrology/ hydrometeorology/ flooding/ water resource management					

<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 audiences in varied locations. All units are presented in the International System of Units (SI).</p>	<p>COMET / MetEd Lesson Viewer (ucar.edu)</p>	<p>A pretty comprehensive starter, aimed at non-hydrologists, but not specific to Africa.</p>	<p>English</p>	<p>L</p>
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