Caribbean Institute for Meteorology and Hydrology

Training Courses 2015

METEOROLOGY

ENTRY LEVEL TECHNICIANS COURSE No. 85/15

Duration: **05 August – 18 December 2015**

This course for observers is intended to provide basic meteorological knowledge and practice in weather observing procedures and in the plotting of synoptic and aviation reports. On completion of the course participants are expected to:

(i) Be familiar with the procedures and rules governing the recording and coding of different weather elements.

(ii) Accurately code, decode and plot synoptic and aviation reports; plot data on surface synoptic charts, upper air charts and thermodynamic diagrams.

(iii) Extract hourly and daily data, and tabulate these data on climatological forms.

(iv) Determine when meteorological instruments are functioning properly.

Nominations close 29 May 2015

MID LEVEL TECHNICIANS COURSE No. 42/15

Duration: **05 August 2015– 24 March 2016**

This course is designed for senior Entry-Level Technicians specialising in one of the following:

(1) Applications of Meteorology;

(2) Instrument Maintenance, Repair and Calibration.

The Applications of Meteorology programme consists of elements of agrometeorology, climatology, hydrometeorology and aeronautical meteorology.

The course is intended for experienced observers who are expected to supervise and instruct Entry-level personnel and assist Senior-Level personnel with the processing of data and the preparation of meteorological and other information. Graduates are expected to:

(i) Have a thorough knowledge of the rules and regulations governing the observing, recording and use of meteorological and other data.

(ii) Quality control data and complete simple statistical and other analysis of the data.

(iii) Prepare summaries and reports of the analysed data

(iv) Assist with field and other experiments in the areas of specialisation.

(v) Inspect and set-up weather observation sites.

(vi) Maintain, repair and calibrate relevant meteorological instruments.

(vii) Assist with the briefing of pilots.

Nominations close 29 May 2015

SENIOR LEVEL TECHNICIANS COURSE No. 22/16

Duration: **8 January 2016 – 14 July 2017**

This course is designed to train personnel as meteorological forecasters. All major areas of meteorology are taught, but emphasis is placed on tropical meteorology.

Graduates of this course are expected to:

(i) Know and understand the main physical and dynamical processes and phenomena associated with weather at all scales.

(ii) Analyse and interpret synoptic weather charts and diagrams depicting current weather conditions.

(iii) Identify the physical and dynamical processes creating the weather conditions and be able to predict what conditions will evolve from the effects of these processes.

(iv) Interpret and use NWP products in the prediction of the weather.

(v) Interpret satellite imagery and use it in analysis and forecasting.

(vi) Prepare terminal and other forecasts for aviation and prepare documentation for use in flight planning and aircraft movement.

(vii) Know the weather conditions which are hazardous to the movement of aircraft and be able to predict these conditions.

Nominations close 25 September 2015

OPERATIONAL AERONAUTICAL FORECASTERS' COURSE No. 6/15

Duration: **15 May – 17 July 2015 ***

This course is specifically designed for applicants with a B. Sc in Meteorology preparing to become operational forecasters. It provides theoretical aeronautical and operational procedures with *emphasis on the practical and operational applications* of the theory to weather analysis and forecasting, particularly in the tropics. This course is designed to bring the applicants to a level that reflects the WMO first and second level competencies for Aeronautical Meteorological Forecasters (AMFs).

Graduates of this course are expected to:

(ii) Analyze and interpret synoptic weather charts and diagrams depicting current weather conditions.

(iii) Identify the physical and dynamical processes creating the weather conditions and be able to predict what conditions will evolve from the effects of these processes

(iv) Interpret and use NWP products in the prediction of the weather

(v) Interpret satellite imagery and use these in analysis and forecasting

(vi) Prepare terminal and other forecasts for aviation and prepare documentation for use in flight planning and aircraft movement

(vii) Know the weather conditions which are hazardous to the movement of aircraft and be able to predict these conditions

(viii) Familiar with the relevant ICAO and WMO standards, recommended practices and codes relating to aviation

(ix)

Nominations close 6 March 2015

* ***OAFC will be limited to 6 candidates. From 2017 OAFC will be offered every other year. Both conditions are to facilitate the limited resources.***

CIMH CONTINUING PROFESSIONAL DEVELOPMENT COURSE FOR AERONAUTICAL FORECASTERS No. 5/16

Duration: **23 September 2016 – 05 May 2017 ON HOLD**

This course is an online course set up for current operational forecasters. It provides additional training in the areas associated with aeronautical meteorology. The course will be retooled to and maintainance of the recommended approved Competence Standards for Aviation Meteorological Forecasting (WMO Publication No. 49, Technical Regulations, Volume I).

The minimum entry requirement for the course is successful completion of the BIP-M requirements as defined in the WMO Publication No. 1083, *Manual on the Implementation of Education and Training Standards in Meteorology and Hydrology*'. Hence, participants must be a graduate of the Senior Level Meteorological Technicians' course and/or have a Bachelor's Degree in Meteorology.

Course on hiatus for 2015
Nominations close 19 September 2016

INSTRUMENT MAINTENANCE: Calibration & Laboratory Practices for Meteorologists INSTLP 1000 No. 2/15

Duration: **1 – 5 June 2015**

The course is designed to provide basic and practical knowledge for Meteorological Technicians in the area if calibration of sensors whilst providing exercise to the candidates in laboratory and field aimed at harnessing the skill set given theoretical information on offer.

Theoretical Component:

- Calibration Methods and Techniques for Digital Pressure Sensors.
- Calibration Methods and Techniques for Rain Gauges.
- Calibration Methods and Techniques for Relative Humidity and Temperature sensors.
- Calibration Methods and Techniques for Winds Sensors.
- Quality Management Mechanism for Data Collection and Archiving.
- Instrumentation and Laboratory Management Systems and Quality Management Systems.
- Quality Assurance Methods for Instrumentation and Data Collection.

Practical Component:

- Exercises in calibration of Rain Gauges, AT/RH Sensors, Digital Pressure Sensors and Wind Speed and Wind Direction.

On completion each candidate is expected to:

(i) Possess the requisite knowledge in checking, verification and calibration of sensors including but not limited to digital pressure sensors, rain recorders, rain gauges, relative humidity sensors and temperature sensors.

(ii) Accurately record, collect, verity and archive data from the aforementioned sensors.

(iii) Determine when sensors are recording inaccurate data.

(iv) Maintain and repair sensors, loggers and general meteorological equipment.

(v) Create and mange quality management and quality control systems.

Nominations close 24 April 2015

HYDROLOGY

HYDROLOGICAL TECHNICIANS COURSE No. HT 26/15

Duration: **31 August 2015 – 22 April 2016**

This course is designed for hydrological technicians in areas of ground water, surface water, water quality and the acquisition and analysis of data. Fieldwork is normally conducted outside of Barbados.

Technicians completing this course successfully would be able to do the following:

(i) Provide continuous knowledge transfer and training to junior technicians through on-the-job training.

(ii) Conduct primary screening of hydrological data, simple analyses

(iii) Assist with preliminary hydrological studies

(iv) Assist with hydrological monitoring programmes

(iii) Assist hydrologists in research.

Nominations close 10 July 2015

DIPLOMA IN HYDROLOGY COURSE No. DipH 17/16

Duration: **8 January 2016 –14 July 2017**

This course is designed to train personnel for the hydrological services in ground water, surface water and other related techniques and applications. Fieldwork is normally conducted outside of Barbados.

Technicians completing the Diploma course successfully are expected to:-

(i) Supervise hydrological technicians.

(ii) Carry out complete screening, analysis and dissemination of hydrological data for both surface and subsurface waters.

(iii) With guidance from the hydrologist, conduct fieldwork in hydrometry, geophysics, ground water extraction, well development and maintenance.

(iv) Assist hydrologists in operations and research.

(v) Collaborate with agencies in practical aspects of surface and ground water utilization.

Nominations close 25 September 2015

SHORT COURSES

BASIC SURFACE WATER MODELLING WITH HEC-HMS (ONLINE)

Duration: **4 – 29 May 2015**

This course offers an introduction to surface water modeling by introducing concepts and tools that can be used to complete basic hydrologic analysis. Participants will learn how to determine design rainfall and how to use that information to develop discharge hydrographs. The course targets persons working in hydrology related fields with limited experience in surface water modeling.

Nominations close 27 April 2015

EFFECTS OF CLIMATE VARIABILITY/CHANGE ON WATER RESOURCES IN THE CARIBBEAN

Duration: **18 – 22 May 2015**

The course aims to examine the impacts of climate variability/change on water resources in the Caribbean by considering both water quantity and quality issues. Impacts include but are not limited to (i) more intense extreme events, (ii) a reduction in annual rainfall, (iv) sea level rise and (v) increased energy demand.

Nominations close 27 April, 2015

ENVIRONMENTAL IMPACTS RELATED TO HYDROLOGICAL SYSTEMS

Duration: **24 August – 4 September 2015**

This course examines natural and man-made disasters and their effects on surface and groundwater, the migration of pollutants such as oil, pesticides, landfill leachate into aquifers and environmental monitoring.

Nominations close 7 August, 2015

GIS FOR HYDROLOGICAL TECHNICIANS (ONLINE)

Duration: **7 September – 2 October 2015**

Participants will be given an introduction to basic Geographic Information System (GIS) concepts with a focus on hydrological applications. This includes the registering, manipulation and analysis of spatial data sets using commercial and open source software.

Nomination close 28 August, 2015

FLOOD HAZARD MAPPING (ONLINE)

Duration: **5 – 30 October 2015**

Participants will learn how to prepare data for flood analysis and will be given an introduction to flood hazard modelling and mapping through an introduction to some basic functionalities and toolsets within ArcGIS. It is recommended that persons complete the "GIS for Hydrological Technicians Course" before attempting the "Flood Hazard Mapping Course".

Nomination close 25 September, 2015

UNIVERSITY OF THE WEST INDIES

B.Sc. DEGREE IN METEOROLOGY

This is a three-year programme offered by the University of the West Indies in association with the CIMH.

For more information please refer to the UWI Cave Hill Campus Faculty of Pure and Applied Sciences Handbook (http://www.cavehill.uwi.edu/fpas/Handbooks/UWI.FPAS.Handbook2007-8.pdf. Additional information and an application form can be obtained from:

The Assistant Registrar (Student Affairs)
University of the West Indies
Cave Hill
St. Michael
Barbados, W.I.

GENERAL INFORMATION

The minimum qualifications for all courses, with the exception of the B.Sc. programme, are 4 CXC Grade I – III (or GCE 'O' level equivalent) certificates including English Language, Mathematics and Physics. In addition, candidates for the Mid Level Technician Course and Senior Level Technicians Course programme should also possess an Entry Level Technicians certificate.

The maximum number of students on each class is 15.

Requests for further information and applications should be sent to:

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