

## **Agrometeorology Engineer**





Training area: Agricultural sciences

Course: Agrometeorology
Specialties: Agrometeorology

**Grade:** Engineer **Purpose:** Professional

**Duration of training:** 6 semesters

Training Venue: AGRHYMET Regional Centre. Niamey, Niger

#### TRAINING OBJECTIVE

The objective is to train qualified managers in processing, application and dissemination of scientific and technical information on Agrometeorology.

### ORGANIZATION OF THE TRAINING

The courses run over 3 years and include theoretical and practical courses, field visits, study trips, end-of-year internships and a 6-month thesis preferably in the student's home country.

## 1st year

Course credits		
Semester 5	Semester 6	
MAT 2501: Mathematics	EVS 2601: Life Sciences	
PHY 2502: Physics	WATER 2602: Water and crops	
ENV2503: Environmental Science	INF 2603: Computer Sciences	
MTF 2504: Fundamental Meteorology	OBS 2604: Weather Observations	
CLI 2505: Climatology	MSS 2605: Synoptic and satellite meteorology	
MTA 2506: Applied Meteorology	INT 2606: Meteorological instruments	
RAD 2507: Radiometry		
TOP 2508: Topographical measurements	TRS 2607: Spatial representation techniques	
LAV 2509: Living Language		



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#### 2nd year

Course credits		
Semester 7	Semester 8	
PER 2701: Project and rural economy	MAG 2801: Agroclimate modelling	
APS 2702: Crop and soil improvement	MEC 2802: Diseases and Crop pests	
PAN2703 : Animal Production	ACC 2803: Climate change adaptation and mitigation	
VCC 2704: Climate change and Variability	BSC 2804: Biometeorology and Climate Services	
MMH 2705: Marine Meteorology and Hydrology	LPI: 2805: Irrigation Control Software	
STE 2706: Applied statistics and surveys	BPA 2806: Agroecology	
VDE 2707: Study trip	EXP 2807: Agronomic experimentation	
GAP 2707: Applied Geomatics	PHA 2808: Phenology and Applications	
SIM 2708 : Internship I	COM 2809: Communication Technology	

#### 3rd year

Course credits	
Semester 9	Semester 10
INA 2901: Agrometeorological information	
SAG 2902: Agrometeorological monitoring	
BDD 2903: Database	
ACL 2904: Climatological analysis	MEM 2101: Thesis
AGM 2905: Agrometeorological analysis	WEW 2101. Thesis
IRR 2906: Irrigation	
SCL 2907: Impact of the CC in Agriculture	
SIM 2908 : Internship II	

#### APPLICATION FILE

Applicants must send to AGRHYMET Regional Centre an application file consisting of:

- \* a detailed CV;
- **\*** a birth certificate;
- certified photocopies of diplomas and transcripts;
- a proof of funding (or a scholarship certificate)

Pre-registrations are issued by AGRHYMET Regional Centre to applicants who meet the conditions to facilitate their search for funding from cooperation agencies, NGOs and other regional and international institutions.

#### TARGET AUDIENCE

The target group will be made up of West African executives from the CILSS/ECOWAS region with a diploma of Senior Technician and working in State services, the broader public sector, private sector, NGOs with professional experience in agricultural fields, Meteorology, etc. Applicants may also be non-professionals. They must hold a DUT (or BTS) (Vocational Training Certificates), a DUE or DEUG (Second Year University diploma) in science or an equivalent diploma.

#### **VENUE AND GRADUATION**

The training will take place at AGRHYMET Regional Centre, Niamey, Niger. It is followed by the issuance of the Diploma of Engineer in Agrometeorology recognized by the African and Malagasy Council for Higher Education (CAMES) as equivalent to a Degree of Design Engineer.



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#### PRESENTATION OF THE AGRHYMET CENTRE

The AGRHYMET Regional Centre (ARC) has a long experience in continuing education and certification in Agrometeorology, hydrology, instruments & micro computing, crop protection, especially in the fields of water management, food security, natural resource management, desertification control. The ARC has developed many scientific cooperation with institutions from the South and the North. Since the introduction of training in 1975, ARC has trained up to year 2010 more than 1,000 executives (masters, engineers, senior technicians) from both CILSS and non-CLSSS countries. As part of continuing training, 200 to 500 people per year are trained by the ARC in the field of Natural Resources Management, desertification control, water management, climate change, etc. The training of the Engineer in Agrometeorology cycle will benefit from a favorable scientific and technical environment linked to the existence on site of internationally recognized skills.

The DFR (Training and Research Department) is responsible for hosting and organizing this training.

The ARC is a Regional Training Centre of the WMO, full member of the AUF and its diplomas are recognized by the CAMES. Finally, its programmes are regularly reviewed by a Scientific and Pedagogical Council composed of eminent researchers and teachers from the North and the South.

#### **HUMAN RESOURCES**

Supervision will be provided by experts from the ARC, the Platform of Training and Research Institutions on the Environment and Meteorology in Niamey (PIREM) composed of several institutions (NBA, ACMAD, EAMAC, ICRISAT, CERMES, Abdou Moumouni University), the United Nations system, senior officials from the Ministries of Water and Environment, private sector executives,

#### MATERIAL AND LOGISTICAL RESOURCES

The ARC has adequate equipment for this training: computer rooms connected to internet, Accommodation of 130 beds with Wifi, amphitheater of 120 places, classrooms, video conference room, 1 didactic meteorological park + an agrometeorological satellite, 2 hectares of irrigated perimeter, audio-visual equipment, rolling stock, etc.

### TASKS PERFORMED BY FUTURE GRADUATES

## Agrometeorology engineers are responsible for:

- Management of agro-meteorological data collection networks;
- ❖ Management of agro-meteorological and climatological databases;
- ❖ The design of agro-meteorological models;
- Agro-climatic and agro-meteorological analyses;
- ❖ Agronomic monitoring of the main Sahelian crops;
- ❖ Seasonal agrometeorological forecasts: interpretation and use in agriculture;
- ❖ Studies of climate change and variability: analysis of agricultural risks, impacts and adaptation;
- ❖ Agrometeorological and phytosanitary advice and extension;
- ❖ The preparation and dissemination of agrometeorological bulletins; NGOs, etc.