SENIOR TECHNICIAN IN INSTRUMENTS/MICRO-COMPUTING

Training area: Science, Technology

Course:

Specialties: Instruments/Micro-Computing

Purpose: Professional

Grade: Senior Technician

Training duration: 04 semesters

Training location: Regional Centre AGRHYMET. Niamey (Niger)

OBJECTIVE OF THE TRAINING

The aim is to train senior technicians qualified for the installation, implementation, management and maintenance of agro-hydro-meteorological equipment, micro-computer equipment, computer networks, telecommunications and other industrial electronic products.

TARGET AUDIENCE

The target group is public or private sector employees working in the fields of agriculture, meteorology or hydrology. Candidates may also be direct students.
All applicants must hold a scientific baccalaureate (C, E, F or D) or equivalent diploma.

TRAINING ORGANIZATION

The course lasts 2 years. The curriculum is structured in course credits (UE) in line with the LMD system.
The professional orientation of the training justifies the importance given to study trips and academic outings, internships in home countries and thesis.
As a result, graduates of this program are directly operational.

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PROFESSIONAL OUTLETS

Graduates are generally employed by state meteorological services, telecommunications companies, IT firms, the private industrial sector and so on.

TASKS PERFORMED BY GRADUATES

Senior technician in Instruments and Micro-computing are responsible for: installation, management and maintenance of:

- Electronics;
- Telecommunications;
- Computer networks;
- Micro-computing;
- Instrumentation (industrial, applied to meteorology, hydrology and Agrometeorology);

HUMAN RESOURCES & EQUIPMENT

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), teacher-researchers from EMIG, ASECNA and ANAC executives, etc.

The ARC's teaching facilities include a 130-bed dormitory with a Wifi communications area, a videoconferencing room, a 120-seat lecture hall, a library stocked with shelf-ready and digitized documents, 2 ha of irrigated land, rolling stock for field trips and study tours, and a range of audio-visual and teaching equipment.

A range of other infrastructure and latest-generation instrumentation and microcomputer equipment is also available to support practical teaching:

- 3 computer rooms connected to the Internet, and videoconferencing facilities;
- a didactic meteorological park and an automatic weather station;
- various state-of-the-art facilities for practical work in micro-computing and computer networks;
- an electronics laboratory with a range of electronic equipment: analog and digital oscillographs, LF function generators, spectrum analyzer, printed circuit board platform, multimeters, kit and PLC.(API).

VENUE AND GRADUATION

Training takes place at AGRHYMET Regional Centre, Niamey, Niger. The Diploma of Senior Technician in Instruments and Micro-computing is recognized by the African and Malagasy Council for Higher Education (CAMES) as equivalent to the University Diploma in Technology (DUT).

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TRAINING PROGRAM

First year

Course credits	
Semester 1	**Semester 2**
MAT1101 : Mathematics	TEC1201 : Telecommunications I
SPH1102 : Physical Sciences	SAM1202 : hydrometeorological Automatic Station
ELB1103 : Basic Electronics	MSI1203 : Maintenance of computer systems
INF 1104 : Computer science	RIN 1204 : computer Networks I
MIC 1105 : Meteorology and Classical Instruments	DET 1205 : Technical drawing
ELE 1106 : Basic Electricity	BDD 1206 : Databases
MEL 1107 : electrical Machines	AMP 1207 : Amplifiers
LAV 1108 : living Language I	LAV 1208 : living Language II

Second year

Course credits	
Semester 1	**Semester 2**
TSI 1301: Internship	RIN 1401: computer Networks
MTE 1302 : Maintenance of electronic	MOL 1402: meteorological Measurements
SYL 1303 : logical Systems	DWE 1403: Web Development
REI 1304 : Industrial Regulation	ADS 1404: Analysis of statistical data,
PET 1305 : Programming Techniques	IME 1405: measurement Uncertainties
TEC 1306 : Telecommunications II	RSC 1406: scientific Writing
SMP 1307 : micro programmed	EMI 1407: Thesis
GEO 1308 : Geomatics	
MIM1309 : Maintenance of Printers	