

**DOMAINE: HEALTH**

**SECTOR: MEDICAL AND BIOMEDICAL SCIENCES**

**SPECIALTY: MEDICAL LABORATORY SCIENCES**

## **1. OBJECTIVE OF TRAINING**

This training aims to produce executives able to detect by laboratory tests, the various pathologies that can affect the human body.

## **2. RESEARCH SKILLS**

### **❖ Generic skills**

- Receive or collect and check the biological sample and record the date, time of collection, patient details, etc.;
- Prepare the analysers, the reagents and the biological sample (fractionation, distribution according to the type of analysis) ;
- Process the sample by centrifugation, dilution, heating, and monitor the progress of the analysis and record the data ;
- Compare the results of the analysis with previous results, minimum values, maximum values and establish the report ;
- Monitor the inventory status of consumables, establish replenishment orders and arrange the equipment according to their validity date and storage conditions ;
- Check the operation of the analysers, update the maintenance register and inform in case of malfunction ;
- Disinfect, decontaminate, tidy the workstation and equipment ;
- Proceed with the evacuation and disposal of waste ;
- Master the computer tool and ICT.

### **❖ Specific skills**

- Perform biological analyses on blood samples, secretions, tissues, urine, stools, etc...
- Conduct biological analyses in anatomo-cytopathology, bacteriology, Biochemistry, parasitology, hematology, immunology / serology, virology ;
- Check the feasibility of a biological sample and inform the patient about its progress ;
- Take a blood sample, monitor the patient's reactions and intervene as needed ;
- Manage the stock of labile blood products in an establishment and supply the units of care ;
- Conduct training actions within an organisation.

## **3. OPPORTUNITIES**

- Public function ;
- Hospitals and private clinics ;
- NGO (Non-Governmental Organisations) ;
- Self-employment ;
- Agribusiness ;
- Occupational Medicine ;
- Research and training.

#### 4. DURATION OF TRAINING

For a period of three years, a set of theoretical and practical courses is administered to students with a view to obtaining a Higher National Diploma (HND) sanctioned by MINESUP.

#### 5. ADMISSION CONDITION

**Direct registration on file study :**

- A hand written application addressed to the Director of SHS ;
- A complete registration form (available on campus) ;
- 01 disciplinary commitment form to be withdrawn from the establishment ;
- A photocopy of birth certificate ;
- A photocopy of A/L certificate ;
- Annual medical coverage : 5,000 FCFA ;
- Registration fees : 35,000 FCFA ;
- File study fees : Free of charge.

#### 6. PEDAGOGICAL APPROACH

- Lectures ;
- Practical work and personal work ;
- Immersion courses in the professions accompanied by a teaching body and company executives.

#### 7. EVALUATION TECHNIQUES

- Continuous assignment for each course ;
- An exam session written and practical at the end of every semester ;
- Writing a research initiation thesis defended before a jury at the end of the program ;
- National HND exam.

#### 8. ORGANISATION OF TEACHINGS

##### SEMESTER 1

Code	Courses titles	Number of credits
<b>MLS111</b>	Cell Biology and history – Anatomy Physiology 1 – General Chemistry	6
<b>MLS112</b>	General Microbiology 1 - General biochemistry	3
<b>MLS113</b>	Sociology and anthropology, Medical Medical Psychology - Ethics and Medical Ethics	4
<b>MLS114</b>	Life-cycle - Nursing - First Aid	4
<b>MLS115</b>	Physics- Mathematics - Biostatistics	4
<b>MLS116</b>	Clinical Internship 1 (immersion)	6
<b>MLS117</b>	Functional English/ Functional French	3
<b>Total</b>		<b>30</b>

### SEMESTER 2

Code	Courses Titles	Number of credits
<b>MLS121</b>	Anatomy and Physiology 2 - Organic Chemistry	6
<b>MLS122</b>	General Microbiology 2 - General Parasitology	3
<b>MLS123</b>	Techniques in the laboratory	3
<b>MLS124</b>	IEC 1- General hygiene and hospitable Infectious and parasitic diseases	6
<b>MLS125</b>	General pharmacology - Nutrition Epidemiology	3
<b>MLS126</b>	Clinical Internship 2(immersion)	6
<b>MLS127</b>	General Economy - Demography	3
<b>Total</b>		<b>30</b>

### SEMESTER 3

Code	Courses Titles	Number of credits
<b>MLS231</b>	IEC 2 - Health and Development Community Health / Biosecurity/Quality management (ISO9001) / Environmental Management Sysem( ISO 1401)	7
<b>MLS232</b>	Initiation to research	2
<b>MLS233</b>	Clinical haematology 1 – Medical Entomology - Blood Transfusion/ Quality Assurance	5
<b>MLS234</b>	Clinical Biochemistry 1 - Laboratory	4
<b>MLS235</b>	Clinical Bacteriology 1 - Laboratory	3
<b>MLS236</b>	Internship of community health 1/Hematology	6
<b>MLS237</b>	Information and Communication Techniques	3
<b>Total</b>		<b>30</b>

### SEMESTER 4

Code	Courses titles	Number of credits
<b>MLS241</b>	Clinical Parasitology 1 - Medical Mycology Immunology / serology	6
<b>MLS242</b>	The economics of health - a priority program of health in Cameroon	3
<b>MLS243</b>	Clinical Bacteriology 2 - Clinical Biochemistry 2 - Laboratory	4
<b>MLS244</b>	Clinical hematology 2 -The Laboratory	2
<b>MLS245</b>	Clinical Internship 3 (parasitology / Immunology)	6
<b>MLS246</b>	Clinical Internship 4 (serology / Anapath / Histology)	6
<b>MLS247</b>	French and English for Medical profession and Law	3
<b>Total</b>		<b>30</b>

### SEMESTER 5

Code	Courses Titles	Number of credits
<b>MLS351</b>	IEC3 - Health Information System - Health Management	6
<b>MLS352</b>	Rédaction de mémoire	3
<b>MLS353</b>	Clinical Parasitology 2 – Clinical Hematology 3 - Laboratory	7
<b>MLS354</b>	Clinical Bacteriology 3 – Laboratory - Virology	3
<b>MLS355</b>	Analytical Chemistry - Laboratory	2
<b>MLS356</b>	Internship of community health 2	6
<b>MLS357</b>	Ethics and Civic education Law	3
<b>Total</b>		<b>30</b>

### SEMESTER 6

Code	Courses Titles	Number of credits
<b>MLS361</b>	Microbiology of the environment – Food Microbiology	5
<b>MLS362</b>	Histopathology –Human Cytology	4
<b>MLS363</b>	Clinical Biochemistry 3 – Clinical Parasitology 3 - Laboratory	4
<b>MLS364</b>	Molecular Biology	2
<b>MLS365</b>	Clinical Internship 5 (Biochemistry)	6
<b>MLS366</b>	Clinical Internship 6 (MycoBacteriology)	6
<b>MLS367</b>	Professional Ethics & Deontology	3
<b>Total</b>		<b>30</b>