



ECOWAS REGION
ESPACE CEDEAO
ESPAÇO CEDEAO

**HARMONISED CURRICULUM FOR UNDERGRADUATE
MEDICAL TRAINING IN THE ECOWAS REGION**

**CURRICULUM HARMONISE DE FORMATION
EN MEDECINE GENERALE DANS L'ESPACE CEDEAO**

**CURRICULO HARMONIZADO DE FORMACAO EM
MEDICINA GERAL NO ESPAÇO CEDEAO**

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- Members of different writing groups of the curriculum harmonization.

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HARMONISED CURRICULUM FOR UNDERGRADUATE MEDICAL TRAINING IN THE ECOWAS REGION

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Preamble

Sub-Saharan Africa shoulders 25% of the global disease burden but, paradoxically, has only 3% of global health personnel. The identified causes stem mainly from lack of planning which leads to her failure in meeting her population's health demands with available human health resources as well as inadequate appropriate basic /continuous training.

Doctors are highly insufficient and are mostly concentrated in urban cities. Noteworthy also, is the massive exodus of these doctors to developed countries which offer them better working conditions and remuneration. The West Africa region is not an exception to this phenomenon of external migration of medical experts.

Furthermore, curricula of undergraduate medical education in the West Africa region are largely un-harmonized such that medical training varies from one country to the other and indeed from one university to another within the same country. This huge disparity in the medical training programs from one country to other and from one language bloc to another has led to the compartmentalization of trainings. Besides, a consequent reciprocal non- recognition of certificates awarded by institutions or their equivalence in different countries is another major problem. Thus, medical doctors hardly move to different countries within the West African Region, even though their right to establish or practice their profession freely is entrenched in the fundamental declarations of the Economic Community of West African States (ECOWAS).

In order to put end to this problem, the West African Health Organization (WAHO) which is a specialised Institution of ECOWAS, in collaboration with different partners, notably Professional Associations and Medical training institutions has since 2009, planned and organised series of first-class workshops. These workshops were aimed at harmonising training curricula of General medical Practice in English, French and Portuguese speaking countries within ECOWAS.

The ground-breaking initiative took place during the Cotonou Meeting of 2nd - 4th June 2009 where the existing curricula was assessed in the presence of Deans of Faculties of Medicine from Anglophone, Francophone and Lusophone countries, Secretaries General of West African College of Surgeons (WACS) and West African College of Physicians, Presidents of Professional Medical Associations, Representative of the African and Malagasy Council for Higher Education (CAMES), and Representatives of WAHO. A major decision was taken on the development of a consensus curricula designed for West African Sub-region.

Major workshops at the level of the ad hoc Deans' committee that followed, made it possible to finalise the harmonisation of curricula, formulate criteria and a consensual accreditation process for the training of General medical Practitioners within ECOWAS region.

Some of the advantages associated with the harmonisation of curricula of General medical Practice in ECOWAS region include:

- Identical scientific content for all basic medical training institutions;
- Acquisition of equivalent skills favouring free circulation of health professionals;
- Easy mobility of teachers and students;

- a possibility of pooling of Human Health Resources in favour of National Systems within ECOWAS sub-region in order to reduce brain drain.
- a unified accreditation process for the ECOWAS region.

Hence, the ECOWAS harmonised curriculum for basic medical training is a tool for mutual recognition, integration and strengthening of professional capacities vis-a-vis the quality of health care and services. It should be seen however as a flexible and dynamic instrument that can be adapted within the region and adopted from the academic session commencing in 2012.

List of abbreviations

ECOWAS	=	Economic Community of West African States
T	=	Theory
P	=	Practical
PS	=	Personal Study
TTH	=	Total Teaching Hours
WAHO	=	West African Health Organisation
WACP	=	West African College of Physicians
WACS	=	West African College of Surgeons
WHO	=	World Health Organization
RCHPE	=	Regional Council for Health Professionals Education

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I. Degree designation

Table I: DEGREE DESIGNATION

	ANGLOPHONE	FRANCOPHONE	LUSOPHONE	HARMONISED
DEGREE TITLE	MEDICAL DOCTORATE BACHELOR OF MEDICINE, BACHELOR OF SURGERY (MD or MBBS or MBChB)	DIPLOME D'ETAT DE DOCTEUR EN MEDECINE	DIPLOMA DE DOUTOR EM MEDICINA	MUTUAL RECOGNITION OF THESE CERTIFICATES

II. Duration of studies and courses format

Studies for the Bachelor of Medicine Degree consist of three cycles: first cycle, second cycle and third cycle. The cycles cover semesters of at least 30 credits each.

- the first cycle (pre-clinical years) covers 4 semesters: S1, S2, S3 and S4, corresponding to 120 credits,
- the second cycle (clinical years) which consists of 8 semesters has 240 credits. It is divided into two parts : the first part (S5 and S6) covers two semesters and the second part covers six semesters (S7, S8, S9, S10, S11, and S12),
- the third cycle covers 4 semesters and has 120 credits in the francophone countries while it covers the period of housemanship in the Anglophone countries. It can be modulated by countries and faculties.

III. Admission requirements

Admission requirements into the medical programme are as detailed in table 2.

Table II: ADMISSION REQUIREMENTS

	ANGLOPHONE	FRANCOPHONE	LUSOPHONE	HARMONISED
ELIGIBILITY CRITERIA	MINIMUM 5 RELEVANT CREDITS AT SENIOR SECONDARY CERTIFICATE EXAMINATION DIRECT ENTRY: 3 ADVANCED LEVEL SCIENCE CREDITS OR VALID 1 ST SCIENCE DEGREE	BACCALAUREAT SCIENTIFIQUE DIPLOME EQUIVALENT CONCOURS PROFESSIONNEL	CERTIFICADO DE 12 ^º DE ESCOLARIDADE	MUTUAL RECOGNITION OF CRITERIA

IV. Training objectives

IV.1 General Objective:

At the end of the training, the medical doctor should possess the attributes of a 5 star-doctor as defined by WHO (Dr. Charles Boelen 2002).

IV.2 Specific Objectives:

The doctor in relation to himself must:

- be comparable to world class doctors
- be equipped to practice medicine all over the world
- be able to define his own professional goals at different levels of his careers through self-directed learning, self-criticism and continuous learning.
- be able to appreciate his professional limits
- be prepared for subsequent studies in any health or science area in relation to his profession
- be Research-oriented

The doctor in relation to his team must:

- be able to integrate himself into and lead a health team
- be able to develop continuous learning and training capacities.
- be equipped to assume the leadership role of the health team as well as plan, set in motion and evaluate health services
- be able to supervise effectively a team for the management of epidemics and disasters.

The doctor in relation to his community must:

- be able to identify and evaluate individual/community health needs, plan and put in place a program aimed at improving their health
- be equipped to sensitise the community in the pursuit of Health
- be equipped to act as an agent of development

The doctor in relation to his profession must:

- be able to maintain and develop personal characteristics and attributes required for a professional life, namely :

- personal integrity,
- sense of responsibility,
- ability to communicate with, show interest in and respect for his patients and his colleagues.

To this end, he/she must abide by the ethics of the profession

V. Content And Harmonised Model Of Undergraduate Medical Curriculum

The harmonised curriculum, in order to achieve set objectives, laid particular emphasis on the following:

- **Curriculum Content:** The content was designed in a flexible and dynamic way taking into account contributions and specificities of different language blocs. It lays emphasis on medical education which is regionally and globally relevant. The curriculum also gives particular attention to high community orientation, Medical ethics, Medical Informatics, Evidence-based medicine, Phytotherapy, and competence in at least two official languages of ECOWAS.
- **Curriculum delivery:** Delivery of the curriculum encourages self-directed and life-long learning.

Details of the harmonised curriculum are shown in table III and IV and the explanatory notes.

Table III: Content of harmonised curriculum

HARMONISED UNDERGRADUATE MEDICAL CURRICULUM IN ECOWAS REGION		
	Courses	Courses Content outline
1	Biostatistics/ Informatics/Basic Information Technology (IT)	Basic Statistics and Probability, Introduction to Computers and basic applications, Medical Records, Hospital information system (HIS), Medical databases.
2	Genetics- cell biology	Cell biology, molecular and clinical genetics
3	Research methods/Bibliography	Information storage and retrieval, Medical informatics, Library use, Scientific writing skills
4	Anatomy	General Anatomy, Systemic and clinical anatomy, Neuro anatomy
5	Embryology/Histology	General Embryology and General Histology, Systemic Embryology and Histology
6	Physiology	General Physiology, Systemic and Clinical Physiology, Neurophysiology
7	Biochemistry	Molecular structures, Metabolism, Nutrition and biochemistry of ageing, Molecular biology
8	2nd Language : French, Portuguese	Basic and Grammar, Conversational, Medical Terminologies, Medical communication skills
9	Community medicine/Public health	Medical Anthropology and Sociology, Basic Epidemiologic concepts, Demography. Preventive Medicine; Community diagnosis; Environmental Health / Eco-health / Sanitation /; Ecology Primary Health Care and Occupational Medicine; Global Health Issues, Health (including complementary) Systems Health Economics / planning / management
10	Medicine and the Law	Medical Ethics; Medical Law; Forensic medicine
11	Rural posting and Project	Rural posting, project
12	Psychology	Basic and Clinical psychology
13	Multidisciplinary Health Care Delivery (MHCD)	Joint sessions with other health professionals-nursing, physiotherapy, human nutrition, pharmacy, dentistry. Basic Nursing Skills.

14	Clinicalskills (Integrated)	Communication and Interviewing skills, History taking and Clinical examination skills, writing skills, hospital record keeping.
15	Laboratory Medicine	General and Anatomical Pathology, Cytology, Cytogenetics; Medical Microbiology- mycology, parasitology, virology and bacteriology; Clinical Haematology; Clinical Chemistry, Immunology, Applied Molecular Biology
16	Pharmacology	Basic Pharmacology, Pharmacokinetics, Systemic pharmacology, pharmacovigilance
17	Traditional medicine and phytotherapy	Introduction to Medicinal plants, Herbal preparations, Research into plant medicine
18	Medicine	Pulmonology, Gastroenterology / Hepatology, Cardiology, Nephrology, Medical Emergencies, Medical imaging, Family Medicine, Neurology, Endocrinology, Rheumatology , Immunological disorders and Medical Oncology, Dermatology & Sexually Transmitted Infections (STI), Toxicology and related disorders, Therapeutics, Chronic Care and Gerontology, physical and Rehabilitation medicine
19	Surgery	General surgery , Surgical Pathology; Fluid and Electrolyte balance, Orthopaedics and Traumatology ; Sports Medicine,

Table IV: Harmonised Model of Undergraduate Curriculum

Teaching Units (TU)			Course (Credithours)		Personal	Total	Credits
Semester 1			Theory (T)	Practical (P)	Study (PS)	T+P+PS	
TU	1	Anatomy -1	60	60	20	140	7
TU	2	Embryology -Histology 1	20	20	20	60	3
TU	3	Physiology 1	60	60	20	140	7
TU	4	Biochemistry 1	60	60	20	140	7
TU	5	Genetics-Cell Biology	20	20	20	60	3
TU	6	Language 1	20	20	20	60	3
Total Teachinghours (TTH)			240	240	120	600	30

Teaching Units			Course		Personal	Total	Credits
Semester 2			Theory (T)	Practical (P)	Study (PS)	T+P+PS	
TU	7	Anatomy 2	60	60	20	140	7
TU	8	Embryology –Histology 2	20	20	20	60	3
TU	9	Physiology 2	60	60	20	140	7
TU	10	Biochemistry 2	60	60	20	140	7
TU	11	Community Medicine 1	60	40	20	120	6
Total Teachinghours			260	240	100	600	30

Teaching Units			Course		Personal	Total	Credits
Semester 3			Theory (T)	Practical (P)	Study (PS)	T+P+PS	
TU	12	Anatomy 3	60	60	20	140	7
TU	13	Physiology 3	60	60	20	140	7
TU	14	Biochemistry 3	60	40	20	120	6
TU	15	Psychology	20	40	20	80	4
TU	16	Biostatistics – Bioinformatics	20	20	20	60	3
TU	17	Language 2	20	20	20	60	3
Total Teaching hours			240	240	120	600	30

Teaching Units			Course		Personal	Total	Credits
Semester 4			Theory (T)	Practical (P)	Study (PS)	T+P+PS	
TU	18	Community Medicine 2	40	80	20	140	7
TU	19	Multidisciplinary HC delivery	40	20	20	80	4
TU	20	ClinicalSkills (Integrated)	40	80	20	140	7
TU	21	LaboratoryMedicine 1 (Integrated)	60	60	20	140	7
TU	22	Pharmacology 1	60	20	20	100	5
Total Teachinghours			240	260	100	600	30

Teaching Units			Course		Personal	Total	Credits
Semester 5			Theory (T)	Practical (P)	Study (PS)	T+P+PS	
TU	23	Laboratory Medicine 2a (CP & H)	40	40	20	100	5
TU	24	Laboratory Medicine 2b AP & MM)	40	40	20	100	5
TU	25	Lab Medicine 2c(Immuno & Mol Biology)	40	20	20	80	4
TU	26	Pharmacology 2	80	40	20	140	7
TU	27	Community Medicine 3	60	40	20	120	6
TU	28	Language 3	20	20	20	60	3
Total Teaching hours			280	200	120	600	30

Teaching Units			Course		Personal	Total	Credits
Semester 6			Theory (T)	Practical (P)	Study (PS)	T+P+PS	
TU	29	Medicine 1a	40	100	20	160	8
TU	30	Medicine 1b	40	100	20	160	8
TU	31	Surgery 1a	40	100	20	160	8
TU	32	Surgery 1b	40	100	20	160	8
Total Teaching hours			160	400	80	640	32

Teaching Units			Course		Personal	Total	Credits
Semester 7			Theory (T)	Practical (P)	Study (PS)	T+P+PS	
TU	33	Medicine 2a	30	90	20	140	7
TU	34	Medicine 2b	30	90	20	140	7
TU	35	Surgery 2a	30	90	20	140	7
TU	36	Surgery 2b	30	90	20	140	7
TU	37	Language 4	20	20	20	60	3
Total Teaching hours			140	380	100	620	31

Teaching Units			Course		Personal	Total	Credits
Semester 8			Theory (T)	Practical (P)	Study (PS)	T+P+PS	
TU	38	Paediatrics 1	50	90	20	160	8
TU	39	OBGYN 1	50	90	20	160	8
TU	40	Paediatrics 2	50	90	20	160	8
TU	41	OBGYN 2	50	90	20	160	8
Total Teaching hours			200	360	80	640	32

Teaching Units			Course		Personal	Total	Credits
Semester 9			Theory (T)	Practical (P)	Study (PS)	T+P+PS	
TU	42	Community Medicine 4	40	100	20	160	8
TU	43	Medicine 3	40	120	20	180	9
TU	44	Surgery 3	40	120	20	180	9
TU	45	Ethics/communication/Jurisprudence/Forensic Medicine	40	20	20	80	4
TU	46	Student Electives / Exchange program	0	40	20	60	3
Total Teaching hours			160	400	100	660	33

Teaching Units			Course		Personal	Total	Credits
Semester 10			Theory (T)	Practical (P)	Study (PS)	T+P+PS	
TU	47	Community Medicine 5*	40	100	40	180	9
TU	48	Medicine 4	20	100	40	160	8
TU	49	Surgery 4	20	100	40	160	8
TU	50	Revision	20	100	40	160	8
Total Teaching hours			100	400	160	660	33

Teaching Units			Course	Practical	Personal	Total	Credits*
			Theory (T)	(P)	Study (PS)	T+P+PS	
HOUSEMANSHIP							
	51	MEDICINE				300	15
	52	SURGERY				300	15
Total Teaching hours			0	0	0	600	30

Teaching Units			Course	Practical	Personal	Total	Credits*
			Theory (T)	(P)	Study (PS)	T+P+PS	
HOUSEMANSHIP							
	53	OBGYN				300	15
	54	PAEDIATRICS				300	15
Total Teaching hours			0	0	0	600	30

* Including projects

* For each semester 30 credits are allocated. For information purposes, credits are allocated to TU.

Explanatory notes:

Anatomy-1	: General anatomy
Anatomy-2	: Systemic and Clinical anatomy
Anatomy-3	: Neuroanatomy
Histology-Embryology-1	: General Histology and Embryology
Histology-Embryology-2	: Systemic Histology and Embryology
Physiology-1	: General physiology
Physiology-2	: Systemic physiology
Physiology-3	: Clinical physiology
Biochemistry-1	: Molecular structures, Metabolism, Molecular biology
Biochemistry-2	: Biochemistry of aging
Biochemistry-3	: Nutrition
Community Medicine 1	: Basic Epidemiologic concepts, Demography, Sociology, Anthropology, Intro to TM
Community Medicine 2	: Preventive Medicine; Community diagnosis; Environmental Health / (Eco health) / Sanitation / Ecology / Intro to Ethics
Community Medicine 3	: Epidemiological and Research Methods including research into plant medicine
Community Medicine 4	: Rural posting, Primary Health Care and Occupational Medicine
Community Medicine 5	: Project; Global Health Issues, Health (including complementary) Systems and Health Economics / Planning / Management / Entrepreneurship.
Laboratory Medicine 1	: General Pathology and Medical Microbiology, Basic Haematology and Clinical Chemistry
Laboratory Medicine 2a	: Systemic Pathology and Chemical Pathology and Clinical Haematology
Laboratory Medicine 2b	: Anatomical Pathology , Systematic Medical Microbiology, Haematological Oncology
Laboratory Medicine 2c	: Basic concepts of Immunology and Molecular Biology, Clinical Applications
Pharmacology 1	: Basic Pharmacology
Pharmacology 2	: Systemic pharmacology and Pharmacokinetics
Medicine 1a	: Infectious Diseases 1, Pulmonology, Gastroenterology / Hepatology
Medicine 1b	: Cardiology, Nephrology, Medical Emergencies 1
Medicine 2a	: Psychiatry 1 and Family Medicine
Medicine 2b	: Neurology, Endocrinology, Rheumatology, Immunological disorders and Oncology; Medical Emergencies 2
Medicine 3	: Dermatology and STI, Infectious Disease2, Radiology (Imaging), Psychiatry 2
Medicine 4	: Toxicology and related disorders, Therapeutics, Chronic Care and Gerontology ; physical and Rehabilitation medicine
Surgery 1a	: Surgical Pathology; Fluid and Electrolyte balance
Surgery 1b	: General surgery
Surgery 2a	: Orthopaedics and Traumatology; Sports Medicine, Physiotherapy, Surgical Emergencies 1
Surgery 2b	: Urology, Cardiothoracic and Neurosurgery, Paediatric surgery; plastic surgery
Surgery 3	: ORL, Dentistry, Ophthalmology, Anaesthesia,
Surgery 4	: Surgical Emergencies 2, Surgical Oncology; Physical and Rehabilitation Medicine

VI. Teaching methods

- theory: Didactic lectures with use of appropriate audiovisual aids, PBL sessions.
- practical : Tutorials, Practical teaching, Case study, Laboratory skills, microscopic, cytological, and histological readings, Image Projection, Fresh-mount study, Scientific and Forensic Autopsy.
- distance-Learning: Teleconference; Online Lecture; Telemedicine

Note: Since teaching should be student-centred, self-directed learning methods shall be given preference

VII. Assessment procedures

→***Below are the assessment Procedures:***

- knowledge Evaluation,
- clinical/Practical Skills Evaluation,
- compulsory Validation of Houseman ship.

→***End of training assessment procedures may in addition include thesis/project Defence before a competent panel.***

VIII. Accreditation of programmes and institutions

It is generally believed that some external process of evaluation for educational programmes and the quality of graduates of medical schools is necessary. This is to ensure that academic standards of any institution do not fall below average and that graduates are suitable for registration as healthcare practitioners.

In the framework of its harmonised medical training curricula within ECOWAS, WAHO has formulated some guidelines and global mechanisms for the accreditation of training curricula and institutions. This is applicable in all ECOWAS Member States. The advantages of such exercise include the harmonisation of minimal practice skills and free movement of professionals within the region. Besides, it enables medical training institutions to check, assess and improve on their quality of teaching activity and skills acquisition. In the formulation of regional accreditation criteria for medical training, guidelines stipulated by the World Federation for Medical Education (WFME) were taken into consideration.

Specific objectives and targets for accreditation and the harmonisation of medical training curricula must be translated so as to implement curricula that guarantee minimal knowledge standards and relevant skills for quality service delivery.

To achieve this, the Regional Council for Health professionals Education (RCHPE) is mandated to implement the accreditation process on behalf of WAHO. A close cooperation between RCHPE and national accreditation/regulatory bodies will enable effective implementation of the accreditation process.

Details of the objectives, processes and check-lists for the accreditation of Undergraduate Medical Curricula will be in a document annexed to harmonised curricula.