

Securite Sanitaire des
Aliments
(MSc - Food Safety)

Dr. Adiogo

Pr. Mbacham

Considerations of use?

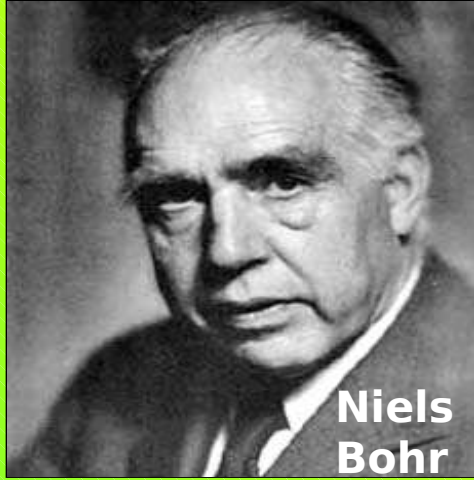
tseluaOne mædnuf

gñ dnatsrednu

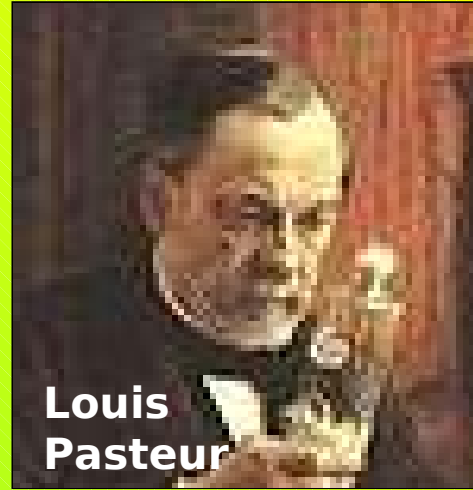
?

Yes

No

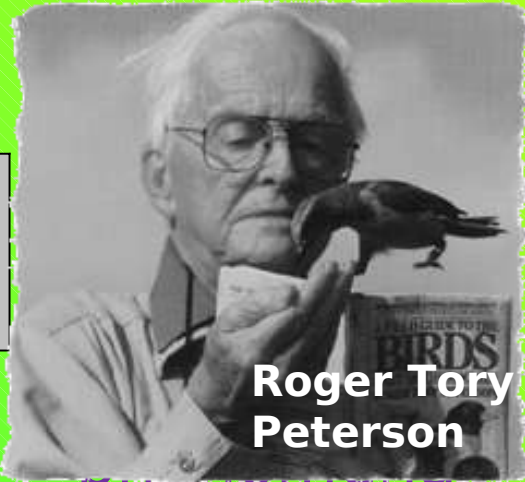


Yes



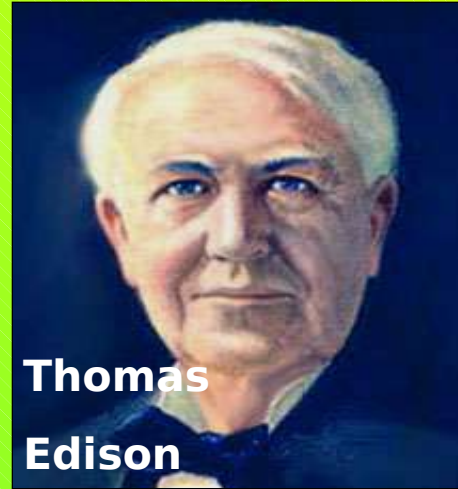
Yes

No



No

Yes



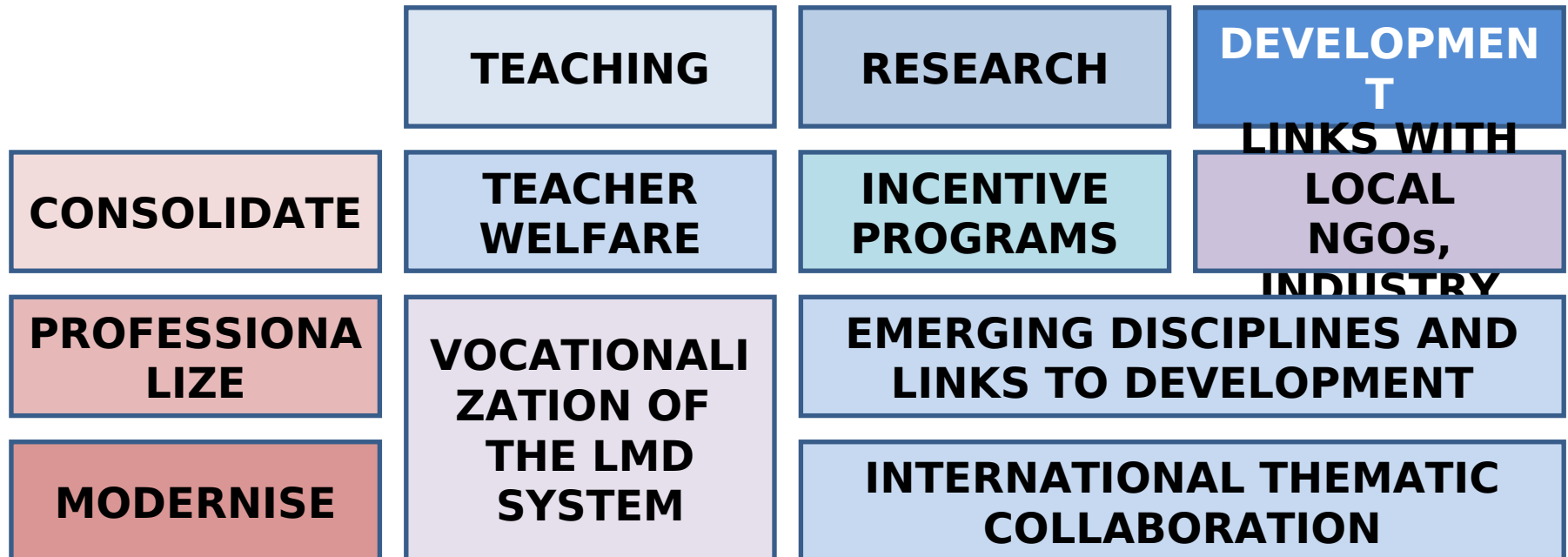
No

Quo va dis Africa? Research Capability Strengthening

		Reactive	
		No	Yes
Proactive	Yes	Bohr	Pasteur
	No	Peterson	Edison

- Proactive Model
Use of Knowledge for better understanding
- Reactive Model -
Application of knowledge

THE CONTEXT IN CEMAC : UNIVERSITY - 3 Missions - 3 Strategies



Introduction to the course

Le Master occupera un créneau différent de celui des autres enseignements. Il s'inscrit dans une perspective de formation pluridisciplinaire, à caractère professionnel aux déjà diplômés de l'université, ingénieurs, vétérinaires, médecins ou autres, susceptibles, à l'issue de la formation, d'occuper des fonctions de contrôle et d'analyse des produits frais ou transformés. Il s'agit donc d'une formation complémentaire d'appoint qui vise les secteurs de contrôle et de maîtrise de la qualité des produits alimentaires sous tous leurs aspects techniques, administratifs, réglementaires, etc....

- L'enseignement proposé aura donc pour objectifs de former des spécialistes de la sécurité sanitaire des aliments. Il comportera quatre séquences :
- disciplines scientifiques et technologiques ;
- outils du contrôle de la qualité ;
- enseignements spécialisés ;
- [stage](#) en entreprise (6 mois).

Student Requirements

Prerequisite

This course is intended for the Veterinary Doctor and auxiliary disciplines

Students must have had the following qualifications

Doctor in Veterinary Medicine, Bachelors in Veterinary Engineering Sciences, Biochemistry, Zoology, Microbiology, Chemical Pathology, Toxicology, Biomedical Sciences, Food Technology or Animal Production

Students who have gaps based on the entry discipline will be asked to take complimentary courses where there are lacking, prior to registration or in addition to their first semester courses.

Expected Student Competence

Cette formation devra offrir des ouvertures importantes vers la connaissance de l'entreprise. En revanche, elle doit considérer comme acquises les données fondamentales de la biochimie, de la microbiologie et de la physique et mettre surtout l'accent sur les applications technologiques et professionnelles:

- science de l'aliment (relations traitements-composition- qualité);
- techniques d'analyse et de contrôles de la contamination;
- ingénierie alimentaire
- L'influence des facteurs en amont de la transformation (techniques culturales, facteurs zootechniques et facteurs du milieu) ne sera pas négligée.
- Le programme d'enseignement fera appel à des conférenciers du secteur industriel, comportera des visites d'entreprises, et la participation à des salons nationaux et internationaux (SIAL...).
- Les enseignants intervenant dans cette formation proviendront de différents établissements membres du réseau LIVE-Edulink.
- Donne à l'étudiant l'expertise d'auto-emploi par une bonne base de fonctionnalité à travers des disciplines para-scientifique - communication, gestion, recherche de financement, projets etc

Methods of Syllabus Build up

Came from objective of a course on “Inspection of food safety” between Univ of Udine and Univ of Yaounde I

Documents from Food safety courses in France, Britain, Canada, USA and India Curricula were adapted to the international context for food safety.

Requirements were considered for Food Regulation in Latin America, Canada, Asia.

Consultation of documents of the Codex Alimentarius and World Organization for Animal Health, International Plant Protection Convention were done

Soft skill courses to professionalise the approach were introduced to provide the MSc with tools to function as an auto-employed individual

Dr. Adiogo - Patho-immunologist and infection Biologists and head of Department in Univ of Douala and Yaounde I, Dr. Abega Clement - Assistant to the Rector for EU programmes and focal point on and Chief of the Courier Service Prof Mbacham - Public Health Biotechnologist and Coordinator of FP7 - PRD College - an international programme in Biomedicine and Development training the next generation of African and European Scientists in Poverty and neglected diseases.

Foodborne Disease

Course Objectives

- Problem of foodborne disease in a global context;
- Analyse its causes and identify preventative strategies;
- To develop and use a number of key skills.

Content

- Foodborne diseases - microbiological, Chemical & physical contamination
- General food hygiene and epidemiology
- The Economics of FB diseases - Burden of foodborne disease
- Food borne disease outbreaks - Epidemiologic Intelligence
- Food safety testing Methods, Instrumentation and Tools
 - Laboratory,
 - Equipment,
 - Human resources
 - GMOs

Industrial Biochemistry

Course Objectives

- Acquire the understand the biochemical basis of toxemia
- Obtain skills in the methods of good laboratory and production practices that lead to quality products
- Methods for the evaluation of standards towards QC/QA

Content

- Processes in transformation et fermentations
- Industrial Enzymology and applications
- Cell Culture and applications
- Food Toxicology
- Quality Control and Assurance
 - Standardisation, certification and manufacturing practises

Hazard Analysis and Critical Control Point (HACCP) Development

Objectives;

- This module aims to enable students to develop competence in Hazard Analysis and Critical Control Point methodology for food safety management.

Content

- legislative requirements - (implementation of the legislation is a problem)
- Risk management in the food industry
- Codex Guidelines
- GMP and ISO certification requirements
- HACCP methodology

Audit and Management

Course Objectives

- To provide candidates with an understanding of the theoretical foundations and practical techniques
- To develop skills necessary to effectively manage and audit HACCP systems.

Content

- Verification and Maintenance
- Performing an Audit
- Legislative compliance
- Project and change management

International Food Law

Course Objectives

- This module aims to review the role of government/non-government bodies in relation to food legislation internationally and identify the implications for manufacturers, retailers and consumers.

Content

- Law systems
- Codex Alimentary Commission
- Creation of and roles of committees and Regulatory Framework
- International Food Law and enforcement frameworks
- Food Codes of Practice and Guidelines
- Current issues in food law (critical reviews)
- Labelling

Food Allergy and Intolerance

Course Objectives

- To develop understanding of the causes, diagnosis and treatment of adverse reactions to foods.
- To evaluate the processes involved in food preparation and food production with respect to their contribution to adverse reactions to foods.

Content

- Definitions of food intolerance and allergy,
- Mechanisms of allergic and non-allergic adverse reactions of foods ingredients
- Food intolerance and management allergens
- GMOs and product development
- HACCP and Crisis management

Food Safety Management

Course Objectives

- To develop an in depth, critical awareness of the scientific, technical and social factors relating to an issue of current concern in food safety.
- To enable candidates to develop and apply a range of investigative techniques and present their findings in a range of styles appropriate to the information needs of different groups.

Syllabus

- Control Methods in Food safety
- Data base creation and management
- Knowledge management
- Methods of advanced literature searching
- Types of and writing of investigative reports

Food Safety Project

Course Objectives;

- This module aims to provide students with the opportunity to apply research methodologies in a specific current area of interest within food safety management. To develop critical analysis and evaluation skills in the interpretation of the results of a research investigation, which will make a contribution to their particular area of interest. To develop research communication skills, including professional research writing and presentation.

Content

- Implementing a research project proposal and plan
- Research Project Management
- Knowledge Management
- Research data Management

***Research Methods in Food Safety**

Course Objectives

- Develop knowledge of research aims and processes;
- Critically evaluate research designs;
- Critical approach to food safety research literature

Content

- Quantitative and qualitative research methods
- The critical evaluation of important theoretical and methodological issues
- Types of data, sampling, handling, analysis and reporting
- Integrity - Reliability, validity and trustworthiness
- Examples drawn from current literature

*Research Governance

Course Objective

- Develop knowledge of Public Relations issues for performance Enhancement
- Support skills for marketing;

Content

- Research Governance;
- Leadership Skills;
- Principles of Market surveys
- Fundamentals of entrepreneurship
- Intellectual Property Rights and Patenting;
- Communications

Course Efforts (1500H)

Part I - 5 lectures (UV) each of 75H = 375H

Part II - 5 lectures (UV) each of 75H = 375H

Part III - 5 lectures (UV) each of 75H = 375H

Part IV - 3 Lectures and Industrial Placements/Projects =
375H

Lectures - 55%, Tutorials - 15% Personal Effort - Practicals -
30%

Either a combination of

Long distance learning to complete gaps + other regular
lectures + Evening Classes - 3pm to 7pm + Intense
summer programme - 20 days x 8hours over 3 years or 2
years of regular classes

MSc in Food Safety with 3 options

Entry Requirement	Options	Employment Opportunities
<p>Doctor in Veterinary (DVM)</p> <p>BSc in Veterinary Engineering Sciences,</p>	<p>Inspection</p>	<p>Food Inspection and Certification</p> <p>Management of food safety lab, set up of SME,</p>
<p>BSc in Biochemistry, Chemical Pathology, Toxicology</p>		<p>Food safety lab, management of nutrition services, creation of diagnostic lab, SME, vet research lab, QC officer is food processing</p>
<p>BSc in Animal Production, Zoology, life science, Agric technology</p>	<p>Bioscience</p>	<p>Self-employed animal forms, SME</p>
<p>BSc in Microbiology,,</p>		<p>Management of food safety lab, management of SME, Management of</p>

Discussions

- Legislation is poor to implement
- Regulatory framework is lacking
- Regulatory framework implementers with police monitoring structures just like foresters do with wood and timber
- LANAVET has a bacteriologic service to train many people with good equipment etc
- L.I.V.E should reposition itself for the EU FP7 2011 call on zoonosis.
- Create a public health module that goes towards training the producer towards quality products
- Veterinary public health administration (Ahmadou Bello, univ)
- Veterinary communication (uni vof Pretoria)

- Biochemists may have to take other course who will complete their lack of knowledge in animal production – food science in general
- A consumer investigations and analysis