

# **Education and training programs in the College of Agriculture and Veterinary Sciences in the University of Nairobi, Kenya and possibilities of collaboration with GO-FAU Program**

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## **Introduction/Background:**

The College of Agriculture and Veterinary Sciences (CAVS) is one of the six colleges of the University of Nairobi. It was established in 1985 by the University Act. CAVS comprises two faculties namely Agriculture and Veterinary Medicine. These faculties comprise 4 and 5 teaching departments respectively, backed up by teaching, research and consultancy facilities / units.

## **VISION**

To be a universal centre of excellence in training, research, outreach and consultancy services in agriculture, veterinary, biomedical, environmental and natural resource sciences in order to realize sustainable and secure livelihoods.

## **Mission:**

To pursue and maintain a world-class leadership role in the quest for knowledge by way of quality research, capacity building, consultancy and innovative outreach in order to contribute to agricultural productivity for poverty reduction and secure livelihoods through sustainable natural resources management.

## **Faculty of Agriculture:**

The Faculty of Agriculture began in 1970 and currently comprises of four (4) teaching departments and Field Stations. These are Department of Agricultural Economics, Department of Plant Science and Crop Protection, Department of Land Resource Management and Agricultural Technology and Department of Food Technology and Nutrition. The Faculty offers seven undergraduate degree programs, namely Bachelor of Science in Agriculture, Bachelor of Science in Food Science and Technology, Bachelor of Science in Range Management, Bachelor of Science in Agribusiness Management, Bachelor of Science in Agricultural Education and Extension, Bachelor of Dietetics and Nutrition and Bachelor of Science in Agroecosystems Management and Environment. The Faculty offers Diploma in Crop Protection at undergraduate level. In addition, the Faculty runs several Masters and certificate courses which are based in the four teaching departments.

Department of Plant Science and Crop Protection:

### **MSc Programmes**

- Plant Breeding
- Horticulture
- Agronomy
- Crop Protection
- Plant Pathology
- Agricultural Resources Management

### ***DIPLOMA***

- Crop Protection

### **CERTIFICATE**

- Horticulture

Department of Land Resource Management and Agricultural Technology:

#### **MSc Programmes**

- Range Management
- Soil Science

Department of Food Technology and Nutrition

#### **MSc Programmes**

- Food Science & Technology
- Applied Human Nutrition

Department of Agricultural Economics:

#### **MSc Programmes**

- Agricultural Economics
- Agriculture & Applied Economics
- Agricultural Resource Management

Faculty of Veterinary Medicine:

The Faculty of Veterinary Medicine was established in 1940 as a Diploma School to deal with animal health issues. It later developed as a full fledged faculty of Veterinary Medicine under Makerere University but later when royal college became University of Nairobi, this faculty was incorporated into the newly established University in the mid-1960s. Currently it comprises five (5) teaching departments. There is one (1) pre-clinical department, namely, Department of Veterinary Anatomy and Physiology which is located at Chiromo Campus of the University of Nairobi. The departments based at CAVS are the Department of Animal Production, Department of Veterinary Pathology, Microbiology and Parasitology, Department of Clinical Studies, and Department of Public Health, Pharmacology, and Toxicology. The Faculty offers three undergraduate degree programs— Bachelor of Veterinary Medicine, Bachelor of Science in Biomedical Technology and Bachelor of Science in Wildlife Management and one diploma programme in Animal Health and Production. In addition, the Faculty runs MSc programmes and certificate courses including Artificial Insemination.

#### **MSc**

- Vet. Pathology Microbiology & Parasitology
- Applied Vet. Parasitology
- Vet. Pathology and Diagnostics
- Applied Microbiology
- Fish Sciences
- Clinical Pathology & Laboratory Diagnostics
- Comparative Mammalian Physiology
- Reproductive Biology
- Animal Breeding and Genetics
- Livestock Production Systems
- Animal Nutrition and Feed

- Sciences
- Veterinary Public health
- Vet. Epidemiology and Economics
- Pharmacology and Toxicology
- Clinical Studies
- Wildlife Health and Management
- Veterinary Anatomy

#### BSc Programmes

- Bachelor of Veterinary Medicine (BVM)
- Biomedical Technology
- Wildlife Management

#### Postgraduate Certificate Courses

- Epidemiology & Disease Surveillance

#### Diploma Courses

- Animal Health & Production

#### Certificate

- Artificial Insemination and Fertility Management
- Fish Hygiene and Inspection
- Milk Hygiene
- Poultry Management
- Dairy Management

Mode of lecture delivery at both undergraduate and postgraduate levels is through a face to face. However, PhD studies are currently through research only.

In both faculties, PhD studies are offered in various disciplines in all departments. The college is very active in research and undertakes both discipline based and multidisciplinary research in basic, applied and developmental/action research. In a recent country ranking, University of Nairobi ranked first in research and information document and management for two consecutive years. The college is actively engaged in consultancy work and outreach activities among the various communities as a demonstration of a caring institution.

How the courses offered and contents at CAVS relate to CGIAR centers mandates and mission:

CAVS mission focuses on food and nutrition security, poverty reduction for secure livelihoods while enhancing sustainability of natural resources. This clearly relates to the CGIAR mission as given:

To achieve sustainable food security and reduce poverty in developing countries through scientific research and research-related activities in the fields of agriculture, forestry, fisheries, policy, and environment.

#### **How GO-FAU Program could contribute to content development and capacity strengthening in your institution**

CGIAR centers have generated a lot of information, knowledge and products through research. These are not readily accessible to capacity building institutions. GO-FAU program can package them and avail them as learning resources. However, GO-FAU program can assist in gap analysis in the MSc programs which

will lead to curricula review and finally relevant content development. This can be focused or generally covering all MSc programs at CAVS. In addition, alternatives of mode of delivery of content should be included. At the moment CAVS is exploring possibilities of delivering content of some MSc programs through open distance learning (ODL). Retooling of some academic staff members will be necessary especially if ODL is incorporated as an alternative in content delivery.

**Other related international and national initiatives that CAVS is involved with:**

- MSc and PGD in AICM: this program was developed out of need for the ASARECA countries. Analyses of training programmes in most African universities indicate that graduates in various scientific disciplines lack adequate capacity to integrate ICT in communicating agricultural knowledge. ICT specialists, on the other hand, lack technical capacity to understand, package and communicate new developments in science. Tertiary institutions can contribute to achieving MDG-1: *Eradicate Extreme Poverty and Hunger*, by training the relevant cadre of graduates to come up with applicable solutions to improving food security and reducing poverty. The overall objective of the proposed postgraduate programme is to build regional capacities in Agricultural Information and Communication Management through training of professionals at MSc and PGD levels and enhancing capacities/competencies of universities to provide higher education and research services in AICM. Faculty of Agriculture, University of Nairobi plans to mount this regional program in 2008/2009 academic year.
- Pilot MSc programs in Entomology and Soil and Water Management. This is a pilot program on Strengthening Environmental and Agricultural Capacity through Distance Education (SEAC-DE). It is a collaborative program of University of Florida and CIAT in partnership with the University of Nairobi and Makerere University. With limited resources, the program have been able to recruit and register two students from Kenya and one from Uganda to pursue MSc studies through ODL. The program has brought in both international and local content into the capacity building initiative. These students have the opportunity to benefit from all the participating Institutions through International team of Advisors. So far, the success of this program is based on genuine commitment of the partners.
- Collaborative MSc Programme in Agricultural and Applied Economics. This is a regional program and Department of Agricultural Economics, Faculty of Agriculture, University of Nairobi is one of the hosting institution.
- PhD regional program under RUFORUM: This PhD program will be hosted by Faculty of Agriculture, CAVS in University of Nairobi.

**Goal of the RUFORUM initiative in drylands**

To improve the livelihoods of communities in drylands of Eastern and Southern Africa through sustainable dryland resource management supported by focused research, graduate training and community based interventions.

**Objectives**

1. To develop national and regional human resource and institutional capacity and competencies to promote innovations and interventions in drylands for sustainable livelihoods
2. To improve drylands resource management by developing new techniques/technologies together with related institutions and capacity building at community level.
3. To enhance productivity of natural resources through improved management.

4. To elucidate the interactions between land degradation processes and climate so as to improve the understanding of potential impacts of some land degradation processes and climate change.
5. To develop site specific guidelines and information tools on suitable dryland resource use and management techniques for use by communities, extension agents and development specialists.
6. To formulate recommendations for supporting policy decisions and promoting investments in agricultural innovation in Africa's drylands.