

ENR 8102	Conflict resolution in Natural Resource management	3
ENR 8103	Environmental politics, policy and legislation	3
ENR 8104	Mineral resources and mining	3
ENR 8105	Energy, Environment and Climate Change	3
ENR 8106	Environmental Health and Sanitation	3
ENR 8107	Facilitation, Interpersonal and Negotiation Skills for Natural Resources Management	3

YEAR II SEMESTER II		
Code	Course Name	(CU)
ENR 8201	Seminar Series II	2
ENR 8202 Research Paper		5

(Footnotes)

- 1 \*One hour of Lecture is equivalent to one contact hour or two hours of Tutorial Practical or four hours of field Work
- 2 \*One hour of Lecture is equivalent to one contact hour or two hours of Tutorial Practical Field Work
- 3 \*One Credit Unit is equivalent to fifteen contact hours
- 4 \*One hour of Lecture is equivalent to one contact hour or two hours of Tutorial Practical Field Work

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## THE PHD PROGRAMME

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The general University regulations governing PhD programmes shall apply. This is basically a three-year programme involving research on any aspect of environment and/or natural resources leading to the preparation of a thesis for the PhD of Makerere University.

### Research at the Institute

The institute has a number of research programmes. Research results are presented and published at national and international levels, in workshops and journals.

Current research areas include:

- (a) Forest and wildlife management
- (b) Fuel wood needs assessments
- (c) Remote sensing and GIS applications for community land use planning and management, land cover mapping, change analysis, planning and analysis
- (d) Biodiversity studies of plants, animals and ecosystems, including the use of molecular techniques in wildlife genetics
- (e) Analysis of biodiversity data for conservation planning
- (f) Solid waste management
- (g) The limnology of lakes and rivers
- (h) Water quality assessment and monitoring
- (i) Wetlands ecology and management

- (j) Appropriate technology for waste water treatment
- (k) Predictive mapping of biodiversity data
- (l) Conservation Genetics

There are some specialised units within MUIENR including:

- (a) The National Biodiversity Databank (NBDB)
- (b) Remote Sensing/GIS Laboratory
- (c) Molecular Biology Laboratory
- (d) Water and Wetlands Research Laboratory
- (e) Makerere University Biological Field Station (MUBFS)

### The National Biodiversity Data Bank (NBDB)

The NBDB was founded in 1990. It monitors the national biological resources in Uganda and provides information to conservationists, government agencies, NGOs, Land Managers and others interested in the conservation and sustainable utilisation of these resources.

### Remote Sensing and GIS Laboratory

The Remote Sensing and GIS Laboratory was initiated in 1992 by several departments of Makerere University when it was realised that a training facility in Remote Sensing and

GIS techniques for applications in the fields of natural resource surveys and management was becoming essential for Uganda. The laboratory has 17 personal computers connected to a Local Area Network.

#### **Molecular Biology Laboratory**

The laboratory is a teaching and research facility. The laboratory was established under the auspices of DANIDA - ENRECA (Enhancement of Research Capacity) program with the aim of training African scientists and generating scientific information necessary for conservation of Africa's wildlife resources. It utilizes genetic information in biological macromolecules (Proteins, DNA and RNA) to address numerous questions and has a potential for application in a wide range of biological fields such as molecular medicine, agricultural and livestock improvement and wildlife genetics. It is capable of handling most molecular biology problems ranging from DNA and RNA extraction through to sequencing, genotyping selected genes and gene cloning. Initially, research in the laboratory was focused on documenting amount and distribution of genetic diversity in Africa's large mammals but has now expanded to include genetics major wildlife and livestock, pathogens, microbial and plant genetics.

#### **Water and Wetlands Research Laboratory**

The water and wetlands research (WWER) laboratory carries out assessment and monitoring of water and wetlands resources with emphasis on wise use of these resources and pollution control. It is equipped with moderate equipment for water quality and plant analysis. It is involved national and regional projects like the Lake Victoria Environmental Project (LVEMP) and the East African Regional Programme and Research Network for Biotechnology, Biosafety and Biotechnology Policy Development (BIO-EARN). In addition to the analytical equipment, the laboratory is connected to a local area network.

#### **Makerere University Biological Field Station**

MUBFS is located in Kibale National Park.

It is mainly involved in research but it is increasingly hosting short international courses in tropical biology. Originally most of the research at MUBFS was in primatology but over the years, the research agenda has broadened to include ecological and behavioural research on other taxa, and socio-economic studies. There is adequate dormitory and guesthouse space for groups ranging between ten and sixty.

#### **Consultancy And Advisory Services**

In collaboration with national institutions, the Institute provides consultancy services to the government and other organisation in Uganda. Consultancy services include tailor made training in different fields of environment & natural resources; assessment and monitoring of environment and natural resources therein; environmental impact assessments and audits, project monitoring and evaluation and facilitation (meetings, seminars, workshops and conferences)