(ii) To achieve a high level of technical competence for development and maintenance of analytical services relevant to clinical needs.
(iii) To enable the student develop skills in utilizing appropriate tests and the interpretation of results as well as the management of clinical data.
(iv) To impart the skills of problem-solving and collaborative research.

Programme Content
The course is composed of three elements: a theoretical part, a practical part, and a research project.

Theoretical Section
Introduction to the course
Analysis of trace elements and vitamins
Analysis of altrogen metabolites;
Endocrinology
General
Hypothalamus:
Adrenal Cortex:
Adrenal medulla
Tyroid
Gonads
Endocrine effects of cancer
Water and electrolytes

Physiology of normal respiration and respiratory diseases

Renal function

Calcium and bone disease. Magnesium

The Liver

Gastrointestinal tract

Clinical chemistry of blood and immune system. Clinical chemistry of pregnancy. Clinical Chemistry of nervous system.

Practical Section

Introduction
(a) Collection of specimens, handling and preservation of samples.
(b) Preparation and storage of biological and biochemical preparations.

Principles and interpretation of the following biochemical techniques.
1. Spectrophotometry
2. Centrifugation
3. Chromatography
4. Electrophoresis
5. Bio-assays
6. Automation
7. Radio Isotopes
8. Clinical enzymology
9. Electrometry
10. Recombinant DNA
11. Immunochemistry
12. NMR Spectroscopy

Experiments will be set to emphasize various aspects of the above techniques.

Methods of standardization, calibration, S1 Units, quality control.

Rotation and Internships
Each student will work for short periods (2 weeks) in the service Laboratories at Mulago Hospital and for two longer periods of 6 (six) weeks each in Hospital Clinical Chemistry Laboratories.

Research Project
Each candidate shall be required to undertake a Clinical Chemistry research project to be supervised by appointed supervisor(s).
The topics for such research projects shall be selected from priority areas identified by the department.

Course Structure
Course Organization and Duration

Year I
47 weeks course made up of 35 weeks of lectures and practical training and 12 weeks of rotations.

Year II
47 weeks made up of 12 weeks of internship followed by research project.

MASTER OF SCIENCE IN BOTANY

(By Course Work And Dissertation)
Programme Structure

Curriculum
(i) The programme shall extend over two academic years each divided into two semesters each of 20 weeks. Each course will be divided into course units. A Course Unit is defined as one contact hour per week, per semester. One hour

of lecture, tutorial or seminar is one contact hour; two hours of practical or field work are equivalent to one contact hour.

(ii) Students will be required to have both theoretical and practical experiences during all the course units.

(iii) The curriculum shall be divided into two parts. Semesters one and two will constitute the first year (Part I); the third and fourth semesters will form the second year (Part II) in which candidates will do research and submit dissertations at the end of the year.

Part 1. ***Course Work.*** This is divided into two sections.
Part I (i) Compulsory Courses: consisting of first year. These courses are offered co-operatively with the Department of Zoology and the Makerere University Institute of Environment and Natural Resources (MUIENR).

The compulsory courses shall be the following:
BOZ. 401 (ENR 401): Acquisition, Processing and Analysis of data.
BOZ.402 (ENR 402): Key aspects of Uganda's environment: Climate and Living resources.
BOZ. 403 (ENR 405): Field Course
BOZ. 404 Natural Resources Law

ii) ***Optional Courses:***
These consist of Optional Core Courses from which each student will select only one option from the following:

BOT 410	Genetics
BOT 420	Natural Resources Ecology and Conservation
BOT 430	Plant Taxonomy and Biosystematics
BOT 440	Microbiology, Seed and Plant Pathology
BOT 450	Advanced Plant Physiology

It is planned that students who are deficient or have interests in some special field may be required to take collateral courses to strengthen their standing. These may include Plant breeding, plant stress physiology, cell biology, plant biotechnology and plant cell and tissue culture. These courses are normally offered in the Department of Botany as some of the final year options at undergraduate level.

MASTER OF SCIENCE IN MATHEMATICS

Introduction
The degree is by coursework and dissertation. There are two disciplines:

Pure Mathematics and Applied Mathematics. Each discipline consists of areas under which different courses will be offered. A candidate is required to indicate right at the beginning of his/her programme the area he/she wishes to work in. For each area there are core courses (i.e Compulsory courses) to be done by the candidate. Note that these core courses do not have to come from the same area. For example whatever area one has chosen, he will have to do a course in Real Analysis and may be Computer Science.

Admission Requirements
A candidate should possess a good first degree from a recognised University in Mathematics or Mathematics com-bined with another subject.
Applicants seeking admission to a particular area of specialisation must show prior competence in the area. Must be specialised in Computational Mathematics, Analysis/ Topology/algebra and differential Equations, Numerical Analysis, Biomathematics/ Operations Research and Advanced statistics.

Programme Structure
The programme has two parts:
Part I:
A candidate is required to do 3 core (Compulsory) courses plus 2 options in his area of specialization.

The duration of this part is one academic year. Before the end of the year, the candidate is expected to have thought out a research project to be done in the next part.

Part II:
The candidate does two more courses in his area of specialization. Also at the beginning of