

- 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

this part he should be starting on his research project. The areas:

Pure Mathematics:

Area A: This consists of subjects such as:
Real Analysis
General Topology
Complex Analysis

Area B: This consists of subjects such as:
Real Analysis/Abstract Algebra
Global Analysis
Algebraic Topology
Differential Equations.

Area C: This consists of subjects such as:
Linear Algebra
Abstract Algebra
Mathematical Foundations (e.g.
Number Theory, Math. Logic, etc.)

Applied Mathematics

Area A: Consists of subjects such as:
Numerical Analysis
Differential Equations
Computer Science

(Real Analysis and/or Linear Algebra may be some of the prerequisites and/or core courses).

Area B: Consists of subjects such as:
Analytical Mechanics
Quantum Mechanics
Fluid Mechanics
Continuum and Statistical Mechanics.
(the pre-requisites may be in Abstract Algebra, Differential Equations and/or Complex Variables).

Area C: Consists of subjects such as:
Operations Research
Computer Science
Biomathematics Equations
Stochastic Process)

Area D: Consists of subjects such as:
Probability Theory
(including Measure Theory)
Stochastic Processes
Mathematical Statistics.

Examinations

In each of the courses done a candidate will do one 3 hour paper. Thus for Part I one will do 5 papers and for Part 2 two papers plus presenting a dissertation on his/her research project.

MASTER OF MATHEMATICS

(Day and Evening)

Introduction

The department of Mathematics has since 1986 offered courses for the Msc.. (Mathematics) in Pure Mathematics, Numerical Analysis, Computer Science and Statistics. This programme has two objectives;
to provide training for those who intend to apply Mathematics in industry, economic development and scientific research;

- (i) to provide training for mathematicians who are interested in fundamental ideas of Mathematics.
- (ii) The department does research in Analysis, topology and Algebra; Biomathematics, Stochastic modelling, Non-linear Dynamics, Numerical Analysis, Operations Research, Statistics and Computational Mathematics.

Objectives

The Master of Mathematics programme has the following objectives:

- (i) to provide courses in Mathematics at a postgraduate level for teachers, and those working in industry;
- (ii) to provide skills for applications of Mathematics including Statistics in Industry and Agriculture and business sectors of the Economy;

Target Group

The programme seeks to attract:

- (i) Tutors and Lecturers of National Teacher Colleges, Technical Institutes and Business Education training institutes.
- (ii) Professionals in business and industry who require advanced Mathematical skills in their work.
- (iii) Scientists in Agricultural and Medical research institutes.
- (iv) Secondary School Teachers.