

training in:

- The mathematical background and statistical methodology needed in the collection and analysis of data from studies in the social and behavioural sciences.
- The methodology for proper acquisition and analysis of social and behavioural sciences data using modern computing software.
- The ability to communicate with researchers in the social and behavioural sciences, as a member of an interdisciplinary team.

#### Admission requirements

1. Common regulations for the Master of Science degree in the University of Nairobi and the School of Mathematics shall be applicable.
2. Holders of a degree of the University of Nairobi of at least Upper Second Class Honours in Mathematics or Statistics or an equivalent qualification from a university recognised by Senate.
3. Graduates in Economics, Sociology, Psychology, Geography and Commerce, with a good Mathematical background.
4. Holders of a Lower Second Class Honours degree plus at least two years relevant research experience or academic work may be considered for admission.

#### Master of Science in Acturial Science

The course is designed to equip the students with advance training in theoretical and practical aspects of Actuarial Science in order for them to work in life and non-life insurance companies (designing insurance products and valuing financial contracts and investing funds); consultancy (offering advice to occupational pension funds and employee benefit plans); Government services (supervising insurance companies and advising on the national insurance); and also in the stock exchange, industry, commerce and universities.

#### Admission requirements

1. Common regulations for the Masters degree in the University of Nairobi shall apply.
2. Holders of a Bachelor's degree in Actuarial Science from the University of Nairobi of at least Upper Second Class Honours or an equivalent qualification from another university recognised by Senate.
3. Holders of a Bachelor's degree in Actuarial Science from the University of Nairobi of Lower Second Class Honours or an equivalent qualification from

another university recognised by Senate. In addition, the candidate must have at least two years relevant work experience.

4. Holders of a pass Bachelor's degree in Actuarial Science from the University of Nairobi or an equivalent qualification from another university recognised by Senate. In addition, the candidate must have at least three years relevant work experience.
5. Holders of a Bachelor's degree from the University of Nairobi or an equivalent qualification from another university recognised by Senate and a Post graduate Diploma in Actuarial Science from the University of Nairobi, of a minimum of Credit grade.
6. Holders of a Bachelor's degree from the University of Nairobi or an equivalent qualification from another university recognised by Senate and a Post graduate Diploma in Actuarial Science from the University of Nairobi, of a Pass grade. In addition, the candidate must have at least two years relevant work experience.

#### PH.D programme:

The School offers PhD programmes in the following areas:

Mathematical Statistics; Pure Mathematics; Applied Mathematics; Biometry; Social Statistics and Actuarial Science.

#### COURSE DURATION

- The minimum duration for the Post-graduate Diploma course shall be three semesters and the maximum duration shall be six semesters. A candidate shall be required to take ten taught course units and a project.
- The minimum duration for the MSc. Courses shall be four semesters and the maximum duration shall be twelve semesters. A candidate shall be required to take twelve taught course units and a project.
- The duration for PhD. Programme shall be at least three years.

#### FEES STRUCURES

##### PGD Acturial Science

Year of Study	Semester I	Semester II	Yearly Total
Year 1	117,500	95,000	212,500
Year 2	20,000		20,000

##### Msc. Pure Mathematics, MSc. Applied Mathematics & MSc. Mathematical Statistics:

Year of Study	Semester I	Semester II	Yearly Total
Year 1	86,500	64,000	150,500
Year 2	81,500	20,000	101,500

##### MSc. Biometry , MSc. Social Statistics & MSc. Industrial Mathematics:

Year of Study	Semester I	Semester II	Yearly Total
Year 1	98,500	76,000	174,500
Year 2	93,500	25,000	118,500

##### MSc. Actuarial Science:

Year of Study	Semester I	Semester II	Yearly Total
Year 1	115,500	96,000	214,500
Year 2	113,500	40,000	153,500

##### PhD program

Year of Study	Total Fee
Year 1	152,200
Year 2	135,200
Year 3	135,200

For more information, contact :  
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UNIVERSITY OF NAIROBI

SCHOOL OF  
MATHEMATICS

POSTGRADUATE DIPLOMA

- Postgraduate Diploma in Actuarial Science

MASTERS AND PhD  
PROGRAMMES

- Master of Science in Biometry
- Master of Science in Social Statistics
- Master of Science in Pure Mathematics
- Master of Science in Applied Mathematics
- Master of Science in Actuarial Science
- Master of Science in Mthematical Statistics
- Master of Science in Industrial Mathematics
- Doctor of Philosophy

[www.uonbi.ac.ke](http://www.uonbi.ac.ke)

## INTRODUCTION

The School of Mathematics located at Chiromo Campus is one of the largest schools in the University of Nairobi with a current establishment of 45 teaching staff and 8 non-teaching staff. The School enrolls about 1700 students each year including more than 60 postgraduate students. The School of Mathematics offers specialised training in Pure Mathematics, Applied Mathematics, Statistics, Biometry, Actuarial Science, Modelling and Operations Research.

The School has collaborative links with the University of Reading in the UK, University of Natal in South Africa, Limburghs University in Belgium and Uppsala University in Sweden. The School facilitates learning through seminars, attachments to institutions such as ILRI, ICIPE, ICRAF, KEMRI and of course through informal contacts with staff and other students.

The School has an up-to-date reference library consisting of books, journals and periodicals. The School has a post-graduate computing laboratory with modern computers, printers and scanners. Various Mathematical and Statistical packages such as S PLUS, SPSS, Epi-info, Matlab, and Maple just to mention a few are available.

## PROGRAMMES' DESCRIPTION

### Postgraduate Diploma in Actuarial Science

The Diploma in Actuarial Science is designed to prepare students for careers in the Actuarial profession, which is concerned with the application of financial, mathematical and statistical techniques to problems in life insurance, casualty insurance, pension funds, medical insurance, investment plans and market securities among others. The course is primarily intended for graduates with a good mathematical background.

#### Admission requirements

1. Common Regulations governing Postgraduate Diploma programs in the University of Nairobi shall apply.
2. Holders of a degree of the University of Nairobi or an equivalent qualification, preferably with a good Mathematics background.

### Master of Science in Pure Mathematics

The overall objective of the course is to train students to acquire increased understanding of the fundamental structures of Mathematics, and lay a firm foundation

for the study of Mathematics and its applications. More specifically, the aims of the course are to:

- Provide students with advanced training in Pure Mathematics
- Expose students to current research trends in Pure Mathematics.

#### Admission requirements

1. Common regulations for the Master of Science degree in the University of Nairobi and the School of Mathematics shall be applicable
2. Holders of a degree of the University of Nairobi of at least Upper Second Class Honours in Mathematics or an equivalent qualification from a university recognised by Senate.
3. Holders of a Lower Second Class Honours degree plus at least two years relevant research experience or academic work may be considered for admission.

### Master of Science in Applied Mathematics

This course is designed to provide students with broad training in mathematics required for analysis and solution of problems in Applied Sciences, and for students intending to pursue research towards a doctoral degree in applied mathematics and related areas. In particular, the aims of this course are to enable the students to:

- Acquire advanced training in Mathematical theory and methods.
- Acquire competence in analysis and solution of applied problems in Science and Engineering.

#### Admission Requirements

1. Common regulations for the Master of Science degree in the University of Nairobi and the School of Mathematics shall be applicable.
2. Holders of a degree of the University of Nairobi of at least Upper Second Class Honours in Mathematics, Physics, or Engineering or an equivalent qualification from a university recognised by Senate.
3. Holders of a Lower Second Class Honours degree plus at least two years relevant research experience or academic work may be considered for admission.

### Master of Science in Industrial Mathematics

The course is designed to enable students to solve economic, environmental or technological problems which require mathematical modelling.

More specifically the aims of the course are to:

- Provide students with advanced training in mathematical methodology relevant for research and applications in Biology, Computer Science, Engineering, Economics, Physics, Operations Research among others.
- Provide students with sound training in the use of modern mathematical methods and appropriate computing skills necessary for modelling real life problems.
- Enable students acquire the ability to communicate with Engineers, Economists, Computer Scientists, Physicists and other researchers as a member of an interdisciplinary team.

#### Admission requirements

1. Common regulations for the Master of Science degree in the University of Nairobi and the School of Mathematics shall be applicable.
2. Holders of a degree of the University of Nairobi of at least Upper Second Class Honours in Mathematics, Physics, Computer Science, Biology or Economics, or an equivalent qualification from a university recognised by Senate.
3. Holders of a Lower Second Class Honours degree plus at least two years relevant research experience or academic work may be considered for admission.

### Master of Science in Mathematical Statistics

This course is designed to provide students with solid grounding in advanced Statistical Theory and methodology required in many areas of research and applications. The aims of the course are therefore to provide students with opportunities to:

- Acquire advanced training in statistical theory and methodology
- Acquire competence and effectiveness in analysing data using modern computing software.
- Develop skills as a statistical consultant

#### Admission requirements

1. Common regulations for the Master of Science degree in the University of Nairobi and the School of Mathematics shall be applicable.
2. Holders of a degree of the University of Nairobi of at least Upper Second Class Honours in Statistics or Mathematics or an equivalent qualification from a university recognised by Senate.
3. Holders of a Lower Second Class Honours

degree plus at least two years relevant research experience or academic work may be considered for admission.

### Master of Science in Biometry

This course is designed to provide advanced training in applied Statistical Methodology needed for studies and applications in Medicine, Pharmacy, Agriculture, Biology and Ecology. The aim is to train students to have the biometric skills to work with research professionals in the design and implementation of research studies to improve the livelihoods of the poor. More specifically, the course aims to provide sound training in:

- The mathematical background and statistical methodology needed to analyse data from studies in Medicine, Pharmacy, Agriculture, Biology and Environment.
- The methodology for proper acquisition and analysis of biological data using modern computing resources.
- The ability to communicate with biomedical or agricultural researchers as a member of an interdisciplinary team.
- Professional issues in biometry to enable them have professional good conduct in practice.

#### Admission requirements

1. Common regulations for the Master of Science degree in the University of Nairobi and the School of Mathematics shall apply.
2. Holders of a degree of the University of Nairobi of at least Upper Second Class Honours in Mathematics or Statistics or an equivalent qualification from a university recognised by Senate.
3. Graduates in Medicine, Agriculture, Biology, Agricultural Engineering, and Agricultural Economics, with a good Mathematical background.
4. Holders of a Lower Second Class Honours degree in the areas specified in 2 and 3 plus at least two years relevant research experience or academic work may be considered for admission.

### Master of Science in Social Statistics

This course is designed to provide advanced training in applied statistical methodology needed for studies and applications in the social and behavioural sciences.

More specifically, the course aims to provide sound