MATHEMATICAL STATISTICS

FACULTY OF SCIENCE

SCAN ME

Statistics is the scientific application of mathematical principles to the collection, analysis, and presentation of data. Statisticians contribute to scientific enquiry by applying their mathematical and statistical knowledge to the design of surveys and experiments; the collection, processing, and analysis of data; and the interpretation and presentation of the results.

WHO WOULD BE INTERESTED IN THIS MAJOR?

Mathematical Statistics is a mathematical science, and so a taste and aptitude for mathematical thinking is a crucial ingredient. The field of statistics, like other areas of applied mathematics, often attracts those interested in the analysis of patterns in data: developing, understanding, abstracting, and packaging analytical methods for general use in other subject areas. Statistics is also, by definition, an information science. Imaginative use of both computing power and new computing environments drives much current research - so an interest in computation and/or computer science can also be a start for a statistician.

SUGGESTED CO-MAJORS

Computer Science, Mathematics, Physics

POST GRADUATE STUDY OPTIONS

- BSc (Hons) Statistical Sciences
- MSc (Advanced Analytics)
- MSc (Biostatistics)
- MSc (Data Science)
- MSc (Mathematical Statistics/ Operations Research/ Statistics for Ecology & the Environment) Dissertation only
- PhD (Statistical Sciences/ Statistics for Ecology & the Environment)

WHAT COURSES WILL YOU TAKE?

The compulsory courses listed below must be in your selection of courses for a major in Mathematical Statistics.

1ST YEAR LEVEL COURSES

- Mathematics I
- Mathematical Statistics

2ND YEAR LEVEL COURSES

- Statistical theory and inference
- Linear models

3RD YEAR LEVEL COURSES

- Stochastic processes and time series
- Statistical Modelling, Machine Learning & Bayesian Analysis

RECOMMENDED COURSES

- Advanced Stochastic Processes
- Mathematics 2
- Computer Science 1

CAREER OPPORTUNITIES FOR GRADUATES

One advantage of working in Statistics is that you can combine your interest with almost any other field in science, technology, or business. Statisticians are routinely rated as being involved in one of the most desirable professions. Statisticians are employed in many fields, including biology, finance, economics, engineering industry, medicine, public health, psychology, marketing, government, education and sports.

Statisticians are key players in the Analytics/ Data Science environment, using their skills to transform large amounts of data into information to solve real-world problems and enhance decision making.

MINIMUM ADMISSION AND SUBJECT REQUIREMENTS

FPS of 550 (but admission only guaranteed at FPS above 660)
Mathematics 70% & Physical Science 60%
NBT in Mathematics, AL & QL to be written