



Department of Statistics Faculty of Science

For further information, Contact:

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Email: dst@stat.cmb.ac.lk Telephone : 2590111 Fax : 2590111 Postgraduate Diploma/ Master of Science in Applied Statistics

University of Colombo Sri Lanka

Pg. Dip./ M.Sc in Applied Statistics

Introduction

Statistics is a Science where the related theories and methods can be applied to a wide variety of disciplines. The truth is that no applied science is complete without statistical reasoning and support. Statistics offers a wide range of career opportunities in many fields. In general, applied statisticians can easily fit into many careers in, Computer Science, Agriculture, Education, Medicine, Economics, and Marketing, to name but a few.

The Department of Statistics (DST) conducts a two year part time course leading to Pg. Dip./M.Sc in Applied Statistics. The course was originally designed and implemented in year 1976, with the assistance from the Department of Applied Statistics, University of Reading, which is a leading University in the UK.

The programme consists of two components; Coursework and Research. After successful completion of the coursework component the students may leave with a Postgraduate Diploma, if necessary criteria are met. Those who wish to obtain the M.Sc in Applied Statistics whilst meeting the necessary criteria should start research under the guidance of expert staff in the relevant area.

Course Aims

In many institutions in Sri Lanka, raw graduates are recruited as research assistants, officers, statisticians, or statistical officers/investigators, and have little practical experience in the use of statistics. This course is aimed at providing training to such persons, as well as to those in other fields that demand such experience. The course emphasizes practical work involving real data analysis which would give the students a measure of confidence in handling real-life situations.

Course Schedule/Facilities

Lectures will be conducted on Saturdays and two weekday evenings, whenever necessary (Wednesday and Friday). Students will also have access to the University library and fully equipped computer laboratory at the DST.

Course Structure

The medium of Instructions is English. The course consists of two components; Coursework component (3 Semesters) and Research component (1 Semester). The coursework component consists of course work, practicals, a group-project and examinations at the end of each of the three semesters. The exam papers and answer scripts are moderated and further examined by foreign academic experts. Proceeding to the final semester is purely based on the performance of the coursework component. Those who proceed to the M.Sc in Applied Statistics. It will be evaluated and further examined through a viva voce examination.

Coursework Component (Part 1)

The course work component will include Probability and Distribution Theory, Statistical Methods, Surveys and Sampling, Experimental Design, Industrial Statistics (Operational Research, Quality Control), Linear and Non-Linear models, Data Analysis Using Statistical Packages, Advanced Inference, Computer Intensive Methods, Medical Statistics, Applied Time Series and Multivariate Methods.

All lectures and practicals are compulsory. Students are divided into groups and each group undertakes a project preferably related to their employment, and submits a report in their second semester. A basic training on the use of computers and statistical packages is provided and students will have access to packages such as SAS, R, MINITAB, and SPSS, installed in the department's computer systems.

The Research Component (Part II)

After completion of the coursework component, the qualified students are required to submit a Masters dissertation which is an integral part of the entire M.Sc. programme. This individual project forms a far larger component than the group-project of Part I. Students are expected to spend a considerable time initially on a literature review, data collection, etc. Usually, about six months is given to submit the final report

Course Lecturers

Prof. (Mrs). M.R.Sooriyarachchi, PhD (Reading, UK) (Medical Statistics, Clinical Trials, Survival Analysis)

Prof. W.N. Wickremasinghe, PhD (Kansas State, USA) (Experimental Design, Linear Models, Non-replicated Experiments) Dr.(Mrs). M.D.T. Attygalle, PhD(Lancaster, UK) (Statistical Modelling)

Dr.(Mrs) K.P.A.Ramanayake, PhD(Bowling Green, USA) (Disclosure Avoidance, Change-Point Analysis)

Dr.(Miss). C.D. Tilakaratne, PhD(Ballarat, AUS) (Time Series, Financial Data Mining)

Mr. R.A.B. Abeygunawardana, M.Sc. (Colombo) (Statistical Quality Control)

Dr.(Mrs) C.H. Magalla, PhD(Kansas State, USA) (Linear and non-linear Models, Multivariate Statistics)

Dr.(Mrs) J.H.D.S.P.Tissera, PhD(La Trobe, AUS) (Simulations, Statistical Computing, Computational Statistics)

Mr. E.R.A.D. Bandara, M.Phil.(Colombo) (Statistical Inference, Functional Data)

Dr. R. V. Jayatillake, PhD (Old Dominion, USA) (Medical Statistics)

Dr. G. P. Lakraj, PhD(Texas Tech, USA) (Statistical Inference) [Course Coordinator]

Dr. S. D. Viswakula, PhD (Old Dominion, USA) (Experimental Design, Bioinformatics)

Mrs. W.M.L.K.N. Wijesekera, MFE(Colombo) (Econometrices, Stochastic Processes and Applications)

Mrs. I. T. Jayamanne, MFE(Colombo) (Survey and Sampling, Statistical Modeling)

Ms. K.A.D. Deshani MFE (Colombo) (Operational Research) [Assistant Course Coordinator]

Dr. D.R.Weerasekera, Senior Advisor(Statistics), Ministry of Health, New Zealand. B.Sc, M.Sc, Ph.D. **[External Examiner]**

Entry Requirements

A Degree of a recognized University or any other qualification judged to be equivalent to above, by the Faculty of Science.

The selection will be based on performance of a written examination & an interview. A sound mathematical knowledge is recommended.