

M.SC. IN DEVELOPMENT STATISTICS

INTRODUCTION

The M.Sc. in Development Statistics is a programme for the training of official statisticians, allied professionals and other persons wishing to acquire the capacity to undertake quantitative analyses in social and economic decision-making initiatives applied to development policy. It is a 36 credit programme comprising 8 taught courses accounting for 27 credits and a research paper accounting for 9 credits.

The focus of the training is on the development of applied skills that will meet the needs of prospective official statisticians, research statisticians, policy analysts and other allied research professionals and technicians. Specifically, learners enrolled in the programme will acquire mastery in the collection, analysis and interpretation of statistics for use in the formulation and implementation of social and economic policy in an emerging economy setting, which is typical of the Caribbean region.

DURATION OF STUDY

The duration of study is one (1) year for full-time learners and two (2) years for part-time learners. Courses will be offered in a combination of asynchronous and synchronous modes of teaching (Online) using either the Cross-campus Moodle platform or the Myelearning platform at the St. Augustine Campus.

PROGRAMME STRUCTURE

There will be two areas of specialization:

- i. Social and Demographic Statistics
- ii. Survey Research

Of the seven (7) compulsory courses, three (3) 4-credit courses shall constitute a CORE, to be taken by all learners, regardless of their areas of specialization.

The 3 CORE courses (4 credits each) are:

SALI6010 - Development Theory and Policy (Semester I)

SALI6011 - Policy Analysis and Management (Semester III)

SALI6012 - Research Methods in the Social Sciences (Semester I)

For learners specializing in **Social and Demographic Statistics**, the following 3-credit courses shall be compulsory.

- i. SALI6015 Survey Research Design and Management (Semester II)
- ii. SALI6016 Demographic Techniques I (Semester I)
- iii. SALI6017 Social Development Statistics (Semester II)
- iv. SALI6031 Techniques of Applied Social Statistical Analysis (Semester II)

For learners specializing in **Survey Research**, the following 3-credit courses shall be compulsory:

- i. SALI6015 Survey Research Design and Management (Semester II)
- ii. SALI6018 Survey Sampling - Design and Estimation (Semester II)
- iii. SALI6019 Elements of Official Statistics (Semester I)
- iv. SALI6031 Techniques of Applied Social Statistical Analysis (Semester II)

ELECTIVES

The 8th course may be chosen from among a list of *electives* which are offered by SALISES or other Departments of the University of the West Indies. The choice of the elective course is to be done in consultation with the Programme Coordinator and must be approved by the Director.

For learners wishing to specialize in Survey Research, it is recommended that they should read SALI6023-Monitoring and Evaluation (Semester II) as their elective.

For learners wishing to specialize in Social and Demographic Statistics, it is recommended that they should read SALI6024-Demographic Techniques II (Semester II) as their elective.

Learners may wish to consider choosing an elective from among the following electives depending upon their academic or professional inclinations:

SALI 6022: Quantitative Methods for Economic Decision-making (Semester III)

RESEARCH PAPER

The topic of the research paper, which will account for 9 credits, will be determined following discussion between the learner and Faculty members. A supervisor will be appointed for each learner.

ENTRY REQUIREMENTS

Prospective applicants are expected to have a minimum of a Bachelor's Degree or equivalent in a Social Science discipline or any other discipline in which he/she would have had exposure to a minimum of an introductory level statistics course.

While preference will be given to persons possessing a minimum of an Upper Second Class Honours Degree or equivalent qualification, applicants' work experience, particularly if it is in a statistical, research or policy-oriented environment, would be favourably considered providing that they possess a minimum of a Bachelor's Degree or equivalent.

COURSE DESCRIPTIONS

SEMESTER: I

COURSE CODE: SALI6010

COURSE TITLE: DEVELOPMENT THEORY AND POLICY

NO. OF CREDITS: 4

COURSE DESCRIPTION: The course is intended to introduce learners to an understanding of the process of development of human societies and to the emergence of the notions of ‘development’ and ‘underdevelopment’ in the context of the world capitalist economic system. It locates Caribbean societies within the processes of imperialism and colonialism in the context of the wider international relations, and explores the initiatives to development attempted in the Caribbean. It also assesses the adequacy of popular theories and notions of development in relation to the history and empirical reality of these societies as well as examines the roles played by various groups in the society in the process of development’.

SEMESTER: III

COURSE CODE: SALI6011

COURSE TITLE: POLICY ANALYSIS AND MANAGEMENT

NO. OF CREDITS: 4

PREREQUISITE: SALI6012 RESEARCH METHODS FOR THE SOCIAL SCIENCES

COURSE DESCRIPTION: The course is designed to expose learners to both basic and sophisticated tools of policy analysis and policy management. To that end, this course provides theoretical perspectives and practical cases to demonstrate praxis in the real world. Participants will acquire state of art skills in policy research and advanced knowledge of the field to enable them to contribute to policy and project formulation in the public, private and NGO sectors.

SEMESTER: I

COURSE CODE: SALI6012

COURSE TITLE: RESEARCH METHODS FOR THE SOCIAL SCIENCES

NO. OF CREDITS: 4

COURSE DESCRIPTION: The principal purpose of this course is to enhance learners' capacities to undertake research assignments in academic and operational contexts as well as critically evaluate research undertaken by other entities. The course is designed to ensure that learners have an appreciation and understanding of the role of the philosophy of science in the research process. It also provides a medium for further discussion and development of issues akin to research design and ethical issues in the conduct of research. Particular emphasis is placed upon exposing learners to quantitative and qualitative methodologies associated with scholarly research processes. In both contexts, where appropriate, topics for discussion will include conceptualization and measurement, data collection, survey sampling, experimentation, secondary data analysis, data preparation and data analytical considerations. Learners will be exposed to research writing practices and the preparation of research proposals.

SEMESTER: II

COURSE CODE: SALI6015

COURSE TITLE: SURVEY RESEARCH DESIGN AND MANAGEMENT

NO. OF CREDITS: 3

PREREQUISITE: SALI6012 RESEARCH METHODS FOR THE SOCIAL SCIENCES

COURSE DESCRIPTION: This course provides a more advanced treatment of issues and topics that arise in the context of survey research. In addition to recapping, the essential features that underlie the survey research process, the course seeks to re-emphasize the importance and enhance the understanding of errors that occur in the conduct of survey research. The course also addresses methodological challenges from the standpoint of cross-sectional and longitudinal surveys, survey instrumentation and data collection, interviewing processes and non-response, data preparation and processing, and ethical considerations. There will be some practical exposure to challenges that usually arise in economic and social surveys.

SEMESTER: I

COURSE CODE: SALI6016

COURSE TITLE: DEMOGRAPHIC TECHNIQUES I

NO. OF CREDITS: 3

COURSE DESCRIPTION: This course introduces the basic techniques of demographic analysis. Learners will become familiar with the sources of data available for demographic research and basic techniques used for demographic analysis. In addition to nuptiality, fertility, mortality and migration and their measurement, introductory and intermediate techniques akin to life table analysis, standardization, cohort and period measures and population projections will also be central in the execution of the course.

SEMESTER: II

COURSE CODE: SALI6017

COURSE TITLE: SOCIAL DEVELOPMENT STATISTICS

NO. OF CREDITS: 3

PREREQUISITE: SALI6012 RESEARCH METHODS FOR THE SOCIAL SCIENCES

COURSE DESCRIPTION: This course provides learners with a greater awareness and knowledge of concepts, methods, statistical procedures and dissemination standards that are commonly associated with a broad range of social statistics. Insofar as such statistics are required to describe and explain social phenomena, the course also addresses epistemological issues that shape one's understanding of the social universe from different standpoints. In treating with methods, the course addresses issues akin to data collection, measurement and data quality assurance and standards in social domains such as education and literacy, living standards measurement, household expenditure, labour force characteristics, public order and public safety, health and well-being, gender, housing and settlement, disaster mitigation and management, ICTs, and the environment.

SEMESTER: II

COURSE CODE: SALI6018

COURSE TITLE: SURVEY SAMPLING - DESIGN AND ESTIMATION

NO. OF CREDITS: 3

PREREQUISITES: SALI6012 RESEARCH METHODS FOR THE SOCIAL SCIENCES, SALI6031 TECHNIQUES OF APPLIED SOCIAL STATISTICAL ANALYSIS

COURSE DESCRIPTION: This is an advanced course requiring knowledge of elementary and intermediate applied statistics and prior exposure to seminars in survey sampling as taught in Research Methods Courses. Learners are exposed to practical problems which enhance their understanding of sampling design issues. With respect to complex sampling designs, there will be some concentration on the development and manipulation of selection and other compensatory weights, methods of handling missing data, the effect of stratification and clustering on estimation and statistical inference, alternative variance estimation procedures, and other challenges associated with statistical estimation and inference.

SEMESTER: I

COURSE CODE: SALI6019

COURSE TITLE: ELEMENTS OF OFFICIAL STATISTICS

NO. OF CREDITS: 3

COURSE DESCRIPTION: This course explores the nature and scope of official statistics in accordance with international standards and provides a framework for tracing its development and role in the transformation of statistical systems in Caribbean societies. As such, the course introduces learners to the historical antecedents that facilitated the development of different statistical systems in Caribbean societies. It also examines critical issues pertinent to different criteria that impact the efficacy, effectiveness and efficiency of systems of official statistics within the Caribbean Region. The course also recognizes the various stakeholders that produce and consume official statistics and strives to sensitize learners about principal virtues that are deemed essential in optimizing exchanges between the different stakeholders.

SEMESTER: II

COURSE CODE: SALI6031

COURSE TITLE: TECHNIQUES OF APPLIED SOCIAL STATISTICAL ANALYSIS

NO. OF CREDITS: 3

COURSE DESCRIPTION: This course is primarily geared towards enhancing the learner's abilities to use and interpret elementary statistical analyses in social research and decision-making contexts. Learners will be exposed to elements of descriptive and inferential statistics in the context of questions and problems that emerge in applied social settings and policy-relevant studies. In this regard, the relevance of univariate, bivariate and multivariate statistics will be highlighted and reinforced especially as tools for social decision-making. This course will enable learners to appreciate the utility of associated statistical measures, their computation and their interpretation. As such, exposure to this course would enhance learners' capacities to function in policy and related environments without requiring further training from their employers. Learners will also be introduced to SPSS, STATA and other related software applications in order to enhance their skills in data management, data manipulation, data analysis and the interpretation of statistical output. A variety of topics will be examined surrounding data analysis such as sampling designs, classification and measurement, data illustration, and statistical analysis.

ELECTIVES

SEMESTER: III

COURSE CODE: SALI 6022

COURSE TITLE: QUANTITATIVE METHODS FOR ECONOMIC DECISION MAKING

NO. OF CREDITS: 3

PREREQUISITE: SALI6031 TECHNIQUES OF APPLIED SOCIAL STATISTICAL ANALYSIS

COURSE DESCRIPTION: Quantitative methods emphasize objective measurements and the statistical, mathematical, or numerical analysis of primary data collected through surveys, questionnaires, and polls, or by manipulating secondary data using computational techniques. This course provides learners with a range of quantitative methods which are commonly used in social science decision-making and policy analysis. Learners will learn the different types of data available for quantitative analysis and advanced data and statistical analysis techniques and the logic behind them. Moreover, the focus of the course will be on the application of quantitative techniques to a wide range of socio-economic development situations. The limitations associated with these techniques will also be examined. Learners will therefore learn how to make sense of real-world data to help answer research questions, inform policy, and further their understanding of the dynamic relationships that exist in society. Learners will also be shown how to carry out quantitative techniques using the statistical program STATA. Learners will therefore gain hands-on experience in using the program to acquire, manage, and assess real-world data.

SEMESTER: II

COURSE CODE: SALI6023

COURSE TITLE: MONITORING AND EVALUATION

NO. OF CREDITS: 3

PREREQUISITE: SALI6012 RESEARCH METHODS FOR THE SOCIAL SCIENCES

COURSE DESCRIPTION: This course exposes learners to major issues that arise in the field of monitoring and evaluation with special reference to developing countries though some cases that emerge out of the experiences of developed countries are presented as alternative scenarios. Despite some initial focus on the philosophical, theoretical and methodological underpinnings of monitoring and evaluation, particular attention is placed upon different research designs that permit practical approaches based upon qualitative and quantitative insights. To this end, different technical inputs that permit monitoring and evaluation will be discussed from the standpoint of their respective theoretical, methodological, statistical and substantive dimensions, and as far as possible, their relevance in practical settings.

SEMESTER: II

COURSE CODE: SALI6024

COURSE TITLE: DEMOGRAPHIC TECHNIQUES II

NO. OF CREDITS: 3

PREREQUISITE: SALI6016 DEMOGRAPHIC TECHNIQUES I

COURSE DESCRIPTION: This course treats with the principles that emerge in the context of more advanced techniques of demographic analysis. It covers demographic techniques based on stable and quasi-stable population theory as well as model schedules of fertility, mortality, nuptiality and migration. As such, the course seeks to develop techniques that are critical in the conduct of demographic analyses in environments and other settings where data are incomplete or defective. The course also seeks to introduce learners to multistate increment-decrement life tables as well as survival analysis.