

# **INSTITUTE OF STATISTICS AND APPLIED ECONOMICS**

## **Introduction**

The Institute of Statistics and Applied Economics (ISAE) was established in 1969 as a Regional Project under the Statistical Training Programme for Africa (STPA) co-ordinated by the United Nations Economic Commission for Africa (UNECA). The Institute currently trains high level professionals in Statistics, Planning and Applied Economics in order to meet the urgent needs of the English speaking countries of Africa. The Institute offers very competitive programs that are highly demanded by both the national and international markets. It offers Undergraduate and Postgraduate programmes. It has three Departments namely:

- (i) Department of Statistical Methods,
- (ii) Department of Population Studies
- (iii) Department of Planning and Applied Statistics.

## **The Department of Statistical Methods**

The Department of Statistical Methods provides the organizational framework for co-ordinating the various training and research activities in Statistical Methods related areas within the ISAE and for developing co-

operative arrangements with other Institutions within and outside Makerere University. The Department offers two Undergraduate Degree Programmes and Two Postgraduate Programmes. The Department also conducts short courses in

1. A practical Approach to Data Processing Statistics using STATA/SPSS
2. Regional Training Workshop: Economic Statistics and National Accounts (July 11-29, 2005).
3. Sampling for practicing statisticians and control Bureaus of Statistics in the African Region.
4. Agricultural Statistics for Local Government Planners, Statisticians and Extension Workers.
5. Project Monitoring and Evaluation for Non-Governmental Organization, provide sector organizations; Public Sector Institution; Central and Local Governments, and International Organizations.

## **UNDERGRADUATE PROGRAMMES**

### **BACHELOR OF STATISTICS (BSTA)**

#### **Programme Structure**

##### **Duration**

<b>Year I: Semester I</b>		<b>CU</b>
STA 1101	Descriptive Statistics	2
STA 1102	Official Statistics	2
STA 1103	Time Series and Index Numbers	3
STA 1104	Elementary French I	3
STA 1105	Introduction to ICT	3
STA 1106	Statistics Practical I	
BQE 1101	Micro Economics I	3
MTH 1101	Calculus	3
MTH 1102	Linear Algebra I	3
ECO 1101	Introductory Micro-Economics	2
	<b>TOTAL Credit Units</b>	<b>22</b>

<b>Semester II</b>		
STA 1201	Statistical Organization	2
STA 1202	Probability Theory I	3
STA 1203	Statistical Inference I	3
STA 1204	Elementary French II	3
STA 1205	Non Parametric Statistics	2
STA 1209	Statistics Practical I	2
BQE 1201	Macro-Economics I	3
BQE 1202	Principles of Development	3
MTH 1201	Calculus II	3
MTH 1102	Abstract Algebra I	3
ECO 1201	Principles of Development Economics	
ECO 1202	Introductory Macro-Economics	
SAS 1202	Accounting I	3

<b>Recess Term</b>		
STA 1301	Workshop on data Processing	5
	<b>Overall Total Year I Credit Units</b>	<b>52</b>
<b>Year II: Semester I</b>		
ECO 2101	Micro-Economics	3
ECO 2106	Industrial Economics	3
STA 2101	Probability Theory II	3
STA 2102	Statistical Inference II	3
STA 2103	Sampling Theory	3
STA 2104	Industrial Statistics	2
STA 2106	Time Series Analysis	2
BPS 1103	Sociology I	2
BQE 2101	Micro-Economics II	3
BQE 2102	Agricultural Production Economics	3
MTH 2101	Real Analysis I	3
MTH 2104	Linear Algebra II	3
MAT 2101	Introduction to Real analysis **	3
MAT 2102	Differential and Difference Equations**	3
MAT 2104	Elements of Mathematics	3
<b>Semester II</b>		
STA 2201	Introduction to Computer Programming	3
ECO 2201	Macro-Economics	3
ECO 2206	Farm Management and Production Economics	
STA 2202	ANOVA and Experimental Designs	2
STA 2203	Elements of Accounts	2
STA 2204	Research Methods	2
STA 2205	Linear Models	2
STA 2206	Regression Analysis	3
STA 2207	Energy and Environmental Statistics	
STA 2209	Statistics Practicals II	2
STA 2210	Linear Programming I	3
BQE 2201	Macro-Economics II	3
BQE 2202	Economics of Industry & Labour	3
BQE 2203	Elements of Development Planning	3
BPS 2206	Research Meathods	3
MTH 2103	Differential Equations*	3
MTH 3203	Linear Programming I*	3
MAT 2201	Linear Programming **	2

MAT 2202	Elements of Mathematics	2
MAT 2203	Calculus 3	2
	<b>TOTAL</b>	<b>25</b>
<b>Recess Term</b>		
STA 2301	Workshop on Socio-Econ Surveys	5
	<b>Total Year II Credit Units = 55 (Including Recess Term)</b>	<b>55</b>

\*\* MAT Courses are for Diploma Holders joining in the 2<sup>nd</sup> year

\* Mathematics Option Courses Year II  
Choose one

<b>Year III: Semester I</b>			<b>CU</b>
BPS 3101	Monitoring & Evaluation		3
STA 3101	Econometrics Methods		4
STA 3102	Multivariate Analysis		3
STA 3103	National acct. & Income Analysis		3
STA 3104	Time Series Analysis		2
<b>Elective Option courses (to choose one Elective option)</b>			
<b>Semester II</b>			
BQE 3203	Elements of Development Planning		3
ECO 3205	Health Economics		
MTH 3203	Linear Programming I		3
STA 3201	Industrial Statistical Modelling		2
STA 3202	Energy and Environment Statistics		3
STA 3203	Research Project		3
STA 3216	Statistics Practicals III		2
<b>Elective Option courses (continue with chosen elective option)</b>			

### (a) Applied Statistics Option

<b>Semester I</b>			<b>CU</b>
STA 3105	Agricultural statistics		3
STA 3106	Demographic & Social Statistics		3
STA 3107	Bio-Statistics		3
<b>Semester II</b>			
STA 3204	External Trade and Balance of Payments Statistics		2
STA 3205	Price Statistics, Distributive Trade & Services Statistics		2
STA 3101	Monitoring and Evaluation		3
STA 3207	Financial Statistics		2

### (b) Development Planning Option

Semester I		CU
STA 3108	Manpower Planning and Human Resource Policies	4
STA 3109	Economic Dimensions of Development	2
STA 3110	Theory and Analysis of Economic Development	3
Semester II		
STA 3208	Social Dimensions of Development	3
STA 3209	Stabilisation and Structural Adjustment	3
STA 3206	Monitoring and Evaluation	2

### (c) Statistical Computing Option

Semester I		CU
STA 3111	Computer Architecture	2
STA 3112	Software Engineering	2

STA 3113	Operations Research	2
STA 3114	Systems Analysis and Design	3
STA 3115	Introduction to Generalised Linear Models	2
STA 3116	Industrial Statistical Modeling	2
STA 3119	Computer Networking	2
Semester II		
STA 3210	Operating Systems	2
STA 3211	Computer Networking	2
STA 3212	Database Management Systems	2
STA 3213	Management of Information Systems	2
STA 3215	Econometric Methods	
STA 3223	Operations Research	2

**TOTAL YEAR III CREDIT UNITS = 41**  
**Total load for BSTA = 148 Credit**

## BACHELOR OF SCIENCE IN QUANTITATIVE ECONOMICS DEGREE (BSQE)

### Introduction

The programme is offered both as a Full-time Day and as an Evening programme. Over the past quarter century, the Institute has achieved its primary objective of training high level personnel in Statistics and Applied Economics.

While B.Stat is a Regional Programme catering for Anglophone Africa and primarily producing statisticians for Government Offices in the areas of official statistics, computing and development planning and policy, Bsc. (QE) is intended to produce analysts with strong background in Statistics, and quantitative techniques of Economists who are currently in high demand in Uganda. The Bsc. (QE) graduates will be used in the many economic sector projects increasing daily.

Furthermore, the graduates of this programme are trained to have a strong base in Mathematics, Statistics, Computing and Economics which should enable them do research and further studies in Quantitative Economics.

Year I: Semester 1		
STA1101	Descriptive Statistics	2

STA 1102	Official Statistics	3
STA 1103	Time Series and Index Numbers	3
STA 1105	Introduction to ICT	3
STA 1106	Statistical Practical I	
ECO 1101	Introductory Micro-Economics	3
BPS 1103	Sociology I	2
MTH 1101	Calculus 1	3
MTH 1102	Linear Algebra 1	3
ECO 1102	Marketing and Cooperatives	3
Semester II		
STA 1201	Statistical Organization	
STA 1202	Probability Theory I	3
STA 1203	Statistical Inference I	3
STA 1205	Non parametric Statistics	2
STA 1209	Statistics Practical I	2
ECO 1201	Introductory Macro economics	3
ECO 1202	Principles of Development Economics	3
MTH 1201	Calculus 2	3
MTH 1202	Linear Algebra 2	3
MTH 1255	Vector Calculus	3
<b>Total Year I Credit Unit = 42</b>		