MEMORANDUM

FOR: Director Luma C. Fajardo, PSO
     Director Jaime P. Gimenez, WSO
     Director Viveca C. Catalig, AO
     Director Angelus T. Wong, LRO
     Ms. Nimfa De Guzman, Planning Branch
     Mr. Cesar Leon Moscoso, EDP Branch

DATE: 19 February 1997

We are endorsing the attached schedule of training courses being offered by the Statistical Research and Training Center for CY 1997.

Should you find any of the courses relevant to your office functions, may we request you to submit the name/s of your proposed participants on or before February 28, 1997.

DANilo M. Coronacion
Deputy Administrator for Management Services
January 9, 1997

MR. FELICISIMO JOSON
Administrator
Philippine Overseas Employment Administration
POEA Bldg., Ortigas Avenue cor. EDSA
Mandaluyong City, 1501

Dear Administrator Joson:

The Statistical Research and Training Center (SRTC), an accredited government training institution mandated to conduct non-degree training in statistics, is pleased to announce its course offerings for 1997. Attached for your reference is a copy of the schedule of training courses for this year.

To encourage wider participation and to make the courses responsive to the changing requirements of client agencies, the introduction of microcomputer application softwares is underscored in selected modules. We are convinced that with the trend towards automation, our computer-based training courses under all levels of competencies (core, practitioner, and specialist) will find greater meaning and relevance.

We hope you will encourage your staff to register and actively take part in these programs. To register and/or confirm your participation, we have attached a copy of the SRTC registration form which you may reproduce as may be necessary. We will appreciate receiving your accomplished registration forms not later than two weeks prior to the start of the training session. For further inquiries, you may get in touch with the SRTC Training Division c/o Ms. Estela S. Espino or Ms. Gina Quiambao, telephone no. 921-5911 and telefax no. 921-7485.

We look forward to welcoming your staff to our training programs.

Very truly yours,

GERVACIO G. SELDA, JR.
Executive Director
# STATISTICAL TRAINING PROGRAMS

<table>
<thead>
<tr>
<th>Training Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Descriptive Statistics</td>
<td>1</td>
</tr>
<tr>
<td>Introductory Course on Applied Inferential Statistics</td>
<td>1</td>
</tr>
<tr>
<td>Statistical Data Management</td>
<td>2</td>
</tr>
<tr>
<td>Sampling Design for Surveys</td>
<td>2</td>
</tr>
<tr>
<td>Regression and Correlation Analysis</td>
<td>3</td>
</tr>
<tr>
<td>Statistical Projection and Forecasting</td>
<td>4</td>
</tr>
<tr>
<td>Effective Use of Microsoft Excel for Statistical Reports</td>
<td>4</td>
</tr>
<tr>
<td>Effective Use of SPSS for Windows</td>
<td>5</td>
</tr>
<tr>
<td>Principal Components and Factor Analysis with SPSS for Windows</td>
<td>5</td>
</tr>
</tbody>
</table>

---

**SRTC** Statistical Research and Training Center
DESCRIPTIVE STATISTICS

RATIONALE

Descriptive Statistics is the area of the science of statistics dealing with methods for collecting, organizing, presenting and summarizing data. It involves the organization of set data into tables, graphs or charts, and other relevant data summarization techniques. It makes the presentation of statistical information more meaningful and easy to understand.

The Training Course on Descriptive Statistics is designed to provide its participants with the proper knowledge in data organization and presentation and to develop their skills in interpreting statistical results.

OBJECTIVES

At the end of the course, the participants should be able to:

a. identify various types of data and their sources;

b. describe data collection procedure;

c. construct statistical tables and graphs for various types of data;

d. compute descriptive statistical measures;

e. analyze various types of data using rates, ratio and proportion;

f. use index number to analyze and interpret data; and

g. prepare a statistical report using descriptive statistics.

INTRODUCTORY COURSE ON APPLIED INFERENTIAL STATISTICS

RATIONALE

In order to meet the increasing demand for trained statistical personnel, the Introductory Course on Applied Inferential Statistics is offered. The training is designed to provide sufficient familiarity with statistical methods to make one a knowledgeable user of statistical results.

The course is suggested for first level statistical personnel who have background in descriptive statistics but find need to upgrade their statistical competencies. It provides an overview of statistical analysis and inference in research undertakings in addition to the understanding of basic ideas of government statistical operations.

OBJECTIVES

At the end of the course, participants should be able to:

a. demonstrate understanding of probability and sampling distributions, and point and interval estimates;
b. compute and interpret point and interval estimates;

c. perform and interpret tests of hypothesis concerning population parameters;

d. use non-parametric methods for analyzing data;

e. analyze simple relationships among variables; and

f. use a microcomputer statistical software for data analysis.

STATISTICAL DATA MANAGEMENT

RATIONALE

A major factor in the success of any data gathering activity is the soundness of the design of questionnaire and a systematic well planned data-processing procedures. Errors in the result of a survey are minimized if these aspects are carefully attended to and standard operational practices are observed. In any survey undertaking, there will be problems encountered and one of these is non-response. There are various methodologies and procedures developed in handling missing data by means of imputation.

Statistical data management focuses on these areas of statistical operation. This training program is conceptualized to address capability building needs of other agencies along this field of statistics.

OBJECTIVES

At the end of the course, participants should be able to.

a. design a questionnaire appropriate to the objectives of the survey;

b. acquire sufficient understanding of principles in editing and coding of questionnaire items;

c. apply imputation procedures for missing data;

d. prepare operations manual for a survey; and

E. use a computer software for data management

SAMPLING DESIGN FOR SURVEYS

RATIONALE

In the conduct of surveys, knowledge of sampling design is required. It is recognized that sampling methods permit the study of characteristics and relationships by the scientific selection of part of a population to represent the whole population. Sample surveys can provide significant advantages in timeliness and cost for collecting certain types of data. As part of the evaluation and monitoring activities of various government agencies, understanding of methods of sampling design for surveys is very important. The course aims to improve and develop the sampling skills of the technical staff involved in the conduct of surveys.
OBJECTIVES

At the end of the course, the participants should be able to:

a. demonstrate an understanding of the variety of requirements involved in the design of a sample survey, considering both theoretical and practical factors;

b. define the basic criteria for accepting a sampling method;

c. describe the nature and properties of the different sampling designs;

d. calculate and allocate sample sizes in an optimum manner;

e. select samples using different sampling schemes;

f. calculate estimates of means, totals, proportions, ratios under different sampling schemes;

g. calculate sample variances of these estimates, and

h. interact more effectively with sampling experts.

REGRESSION AND CORRELATION ANALYSIS

RATIONALE

Data arising from measurement of variables become interesting if we are able to establish some relationship between them. It becomes even more interesting and useful if we are able to make predictions in the value of one variable given the values of one or more variables. Regression is a highly useful statistical technique for developing a relationship between a dependent variable and one variable and one or more independent variables. It may use experimental data on the pertinent variables to develop a numerical relationship showing the influence of the independent variables on a dependent variable of the system.

OBJECTIVES:

At the end of the course, participants should be able to:

a. apply the concepts and procedures in regression analysis;

b. know when a regression is to be used given the different types of data;

c. evaluate the effect and the relative importance of the independent variable which explain the variation of the dependent variable;

d. identify the best regression model in analyzing statistical data, and

e. explain and compare the different regression lines fitted to the data.
STATISTICAL PROJECTION AND FORECASTING

RATIONALE

Production, sales, and profit are some of the goals of a business. In the pursuit of these goals, management must plan for the future by making forecasts and predictions. Valid forecasts can only be made after the management has a thorough understanding of how various conditions affect their business operations. Much of this understanding may be gained by observing the past. Careful examinations of past experience reveals what must be considered in making forecasts and planning future operations.

Analyzing information for previous time periods is the subject of Time Series Analysis. A time series is the measurement of a variable taken over time. Time series are studied in order to understand and explain movements over time, to make comparisons over time, and to make predictions or forecasts.

The training on Time Series Analysis is designed to provide the participants with the knowledge in analyzing data in the past, comparing with the present and predicting for the future.

OBJECTIVES

At the end of the training, participants will be able to:

- describe the nature of a trend;
- calculate a moving average to smooth a time series;
- select the best techniques in trend analysis and forecasts;
- identify the patterns in order to understand the fluctuations in a series; and
- use the TIME SERIES PACKAGE software.

Effective Use of Microsoft Excel for Statistical Reports

RATIONALE

Effective presentation of statistical information largely depends on the computer software used to generate the report. Microsoft Excel is a comprehensive spreadsheet application that lets you manage, format, chart, and analyze data. The software has a wide application for various kinds of everyday office work but the training focuses only on applications for preparing statistical reports. Familiarity with the basic functions of microcomputers is required in attending this training.

OBJECTIVES

At the end of the training, participants should be able to:

1. Apply data entry techniques.
2. Organize and manage data for tabular presentation.
3. Retrieve and analyze data from tables.
4. Create graphic objects and charts.
5. Use formulas to analyze data.
6. Use techniques for descriptive analysis of data.

**Effective Use of SPSS for Windows**

**Rationale**

Statistical analysis involving large data sets requires powerful statistical software that could handle data analysis effectively from the most basic to more advanced statistical methodologies. This training on SPSS aims to provide the participants with sufficient background knowledge on the use of this popular statistical software. It covers general operation of the software and file management. It will guide the participants in exploring the various features of the software with specific emphasis on the features under SPSS Base.

**Objectives**

At the end of this training participants should be able to:

1. Handle the data management of the software according to the desired specifications.
2. Utilize the file management features of the software under various conditions.
3. Apply various techniques for variable transformations.
4. Generate various tools for descriptive statistics including tables and graphs.
5. Employ various techniques under the general operations of the software.

**Principal Components and Factor Analysis with SPSS for Windows**

**Rationale**

Researches in social sciences and economics often times involves determining or analyzing the dependence structure of variables. If one would attempt to identify the hidden factors which have generated the dependence or variation in the responses, the method falls under the general heading of factor analysis. In this method, the observable variables are represented as functions of a smaller number of latent factor variates. A more parsimonious description of the dependence structure can be obtained if that term is simple and if the latent variates are few in number. The development of the method begins with the principal component technique.

**Objectives**

At the end of this course, participants should be able to:

1. Handle file management of the data for factor analysis.
2. Interpret computer outputs for factor analysis.
3. Apply factor analysis to a given set of data and interpret the result.
Training Course

<table>
<thead>
<tr>
<th>Name</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Descriptive Statistics with Computer Applications</td>
<td>1.</td>
</tr>
<tr>
<td>March 3-7</td>
<td>2.</td>
</tr>
<tr>
<td>May 19-23</td>
<td>3.</td>
</tr>
<tr>
<td>Introductory Course on Applied Inferential Statistics</td>
<td>1.</td>
</tr>
<tr>
<td>April 14-18</td>
<td>2.</td>
</tr>
<tr>
<td>July 14-18</td>
<td>3.</td>
</tr>
<tr>
<td>Effective Use of MS Excel &amp; Chart for Statistical Reports</td>
<td>1.</td>
</tr>
<tr>
<td>March 17-21</td>
<td>2.</td>
</tr>
<tr>
<td>June 2-6</td>
<td>3.</td>
</tr>
<tr>
<td>Effective Use of SPSS for Windows</td>
<td>1.</td>
</tr>
<tr>
<td>April 22-24</td>
<td>2.</td>
</tr>
<tr>
<td>Statistical Data Management</td>
<td>1.</td>
</tr>
<tr>
<td>August 4-18</td>
<td>2.</td>
</tr>
<tr>
<td>Regression Analysis with SPSS for Windows</td>
<td>1.</td>
</tr>
<tr>
<td>May 12-14</td>
<td>2.</td>
</tr>
<tr>
<td>Principal Components &amp; Factor Analysis with SPSS for Windows</td>
<td>1.</td>
</tr>
<tr>
<td>June 9-11</td>
<td>2.</td>
</tr>
<tr>
<td>Sampling Design for Surveys</td>
<td>1.</td>
</tr>
<tr>
<td>June 23-27</td>
<td>2.</td>
</tr>
<tr>
<td>Forecasting Techniques Using Time Series Data</td>
<td>1.</td>
</tr>
<tr>
<td>September 1-5</td>
<td>2.</td>
</tr>
</tbody>
</table>

Registered by:

Signature
Name in Print
Designation
Company
Address
Tel. No.

NOTE: Please make all checks payable to Statistical Research and Training Center
1997 Training Schedule

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Duration</th>
<th>Date</th>
<th>Registration Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Core Competencies</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Descriptive Statistics with Computer Applications</td>
<td>5 days</td>
<td>March 3-7</td>
<td>P 3,500.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>May 19-23</td>
<td></td>
</tr>
<tr>
<td>2. Introductory Course on Applied Inferential Statistics</td>
<td>5 days</td>
<td>April 14-18</td>
<td>P 3,500.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>July 14-18</td>
<td></td>
</tr>
<tr>
<td><strong>Practitioner Competencies</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Effective use of Microsoft Excel &amp; Chart for Statistical Reports</td>
<td>3 days</td>
<td>March 18 - 20</td>
<td>P 2,500.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>June 3 - 5</td>
<td></td>
</tr>
<tr>
<td>2. Effective Use of SPSS for Windows</td>
<td>3 days</td>
<td>April 22-24</td>
<td>P 2,500.00</td>
</tr>
<tr>
<td>3. Statistical Data Management</td>
<td>8 days</td>
<td>August 4 - 13</td>
<td>P 4,500.00</td>
</tr>
<tr>
<td><strong>Specialist Competencies</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Regression Analysis with SPSS for Windows</td>
<td>3 days</td>
<td>May 12 - 14</td>
<td>P 2,500.00</td>
</tr>
<tr>
<td>2. Principal Components and Factor Analysis with SPSS for Windows</td>
<td>3 days</td>
<td>June 9 - 14</td>
<td>P 2,500.00</td>
</tr>
<tr>
<td>3. Sampling Design for Surveys</td>
<td>5 days</td>
<td>June 23 - 27</td>
<td>P 3,500.00</td>
</tr>
</tbody>
</table>