

ORIGINAL IN SPANISH

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International Statistical Programs Center

SCHOOL FOR APPLIED STATISTICS AND DATA PROCESSING TECHNOLOGY

ESAYTEC

Spanish-Language Training Programs: 1989-1990

FOR:

Statisticians

Programmers

Systems Analysts

Managers of Statistical
Activities

Data Users

U.S. Department of Commerce
BUREAU OF THE CENSUS

U.S. Agency for
International Development

CALENDAR OF TRAINING ACTIVITIES 1989-1990

This calendar includes training activities scheduled to be conducted during the 12-month period from May 1989 to April 1990.

Workshop on Integrated Microcomputer Processing System (IMPS)--in Cali, Colombia

June 16, 1989.....	Deadline for receiving nominations
July 24 to August 18.....	Workshop

7-Month Modular Courses--in Washington, D.C.

September 1989 to April 1990:

August 12.....	Deadline for receiving nominations
September 4 and 5.....	Arrival in U.S.
September 6 to 12.....	Orientation
September 12 to December 15.....	Module 1 (13 weeks)
December 18 to January 2, 1990.....	Recess
January 3 to February 23.....	Module 2 (8 weeks)
February 26 to March 2.....	Management-Communications Seminar
March 5 to April 27.....	Module 3 (8 weeks)

May 1990 to November 1990:

May 1 to July 27.....	Module 1
July 30 to August 10.....	Recess and Management-Communications Seminar
August 13 to October 5.....	Module 2
October 9 to November 30.....	Module 3

3-Month Data User Services Course in Washington, D.C.

December 1, 1989.....	Deadline for receiving nominations
January 2, 1990.....	Arrival in U.S.
January 3 to 5.....	Orientation
January 8.....	Classes begin
March 30.....	End of classes

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TRAINING ACTIVITIES PLANNED FOR 1989-1990

**ESCUELA DE ESTADISTICA APLICADA Y TECNICAS DE COMPUTACION
(ESAYTEC)**

International Statistical Programs Center
U.S. Bureau of the Census

In Washington, D.C.

7-Month Modular Courses, September 12, 1989 to April
27, 1990 and May 1, 1990 to November 30, 1990:

- * Economic Development Statistics
- * Population Censuses and Surveys
- * Computer Data Systems

Note: The above modular courses consist of 2- and 3-
month modules. Modules can be taken individually or in
combinations for programs of 2, 3, 4 or 5 months.

- * 3-Month Course in Data User Services, January 8 to
March 30, 1990.

In Latin America

- * Workshop on Integrated Microcomputer Processing System
(IMPS), July 24 to August 18, 1989 in Cali, Colombia.
- * Workshop on Effective Data Producer-Data User Interface
(site and date not yet determined).

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2/23/89



International Statistical Programs Center

**ESCUELA DE
ESTADISTICA APLICADA
Y TECNICAS
DE COMPUTACION**

ESAYTEC

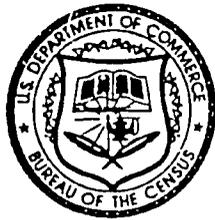
**PROGRAMAS DE CAPACITACION
EN ESPAÑOL: 1989-1990**

Issued February 1989



U.S. Department of Commerce
Robert A. Mosbacher, *Secretary*
Robert Ortner, *Under Secretary for
Economic Affairs*

BUREAU OF THE CENSUS



BUREAU OF THE CENSUS

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for International Programs***

**INTERNATIONAL STATISTICAL
PROGRAMS CENTER**

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C O N T E N T S

	<u>Page</u>
PART ONE: GENERAL INFORMATION	
I. Introduction.....	3
II. 1989-1990 Training Program.....	3
III. Objectives and Training Methods.....	4
IV. Program Location and Schedule of Activities.	6
V. Staff and Facilities.....	8
VI. Eligibility Requirements.....	9
VII. Diplomas and Certificates.....	9
VIII. Costs and Sponsorship.....	10
IX. Procedures for Obtaining Funding and Nominating Candidates.....	11
X. Other Considerations.....	15
XI. Additional Information.....	15
 PART TWO: DESCRIPTION OF TECHNICAL COURSES SCHEDULED DURING THE PERIOD MAY 1989 TO APRIL 1990	
XII. New Modular Course in Economic Development Statistics--7 Months.....	17
XIII. Modular Course in Population Censuses and Surveys--7 Months.....	20
XIV. Modular Course in Computer Data Systems--7 Months.....	23
XV. New Course in Data User Services--3 Months..	26
 PART THREE: DESCRIPTION OF WORKSHOPS SCHEDULED DURING THE PERIOD MAY 1989 TO APRIL 1990	
XVI. Integrated Microcomputer Processing System (IMPS).....	29
XVII. Effective Data-User Data-Producer Interface.	30
 PART FOUR: OTHER SEMINARS AND WORKSHOPS AVAILABLE	
XVIII. Illustrative List of Other Seminars and Workshops Available.....	33

PART ONE

GENERAL INFORMATION

I. INTRODUCTION

In 1986 the Bureau of the Census inaugurated the Escuela de Estadística Aplicada y Técnicas de Computación (ESAYTEC) to make available to the countries of Latin America a program of applied training in the Spanish language. ESAYTEC training activities will be gradually phased in over a 5-year period through 1990. The U.S. Agency for International Development is funding the preparation of the curriculum and training materials.

The International Statistical Programs Center (ISPC) of the U.S. Bureau of the Census has conducted training programs for foreign statisticians for 42 years, and through these programs has contributed substantially to statistical development in many countries. These training programs serve urgent and changing needs of developing countries for trained personnel to collect, process, and analyze statistical data. Since its inception, the ISPC program has trained more than 5,000 statisticians, computer specialists, and data analysts from nearly 150 countries. Until the creation of ESAYTEC, these programs were offered only in the English language.

This booklet describes in detail the training activities that will be offered during the period from May 1989 through April 1990. Two types of training activities are conducted by ESAYTEC: workshops and seminars of up to 3 weeks in duration and intensive technical training courses lasting from 2 to 7 months. The workshops and

seminars are designed to provide short-term training ranging from very specific technical topics for subject matter specialists to broader executive-level training in areas such as census planning and use of data in the policy-making process.

The technical courses consist of 2- and 3-month modules that can be taken individually or in various combinations appropriate to the participant's experience and background. The purpose of the modular programs is to provide in-depth technical training in the specific skills needed to carry out many different phases of ongoing statistical activities. Each program consists of three modules progressing from introductory to advanced material over the 7-month period. Although participants elect an area of specialization, they are given a background in related fields and skills in order to understand how their particular specialty fits into the total statistical program or system.

II. 1989-1990 TRAINING PROGRAM

Two technical courses will be added: a 7-month modular course on Economic Development Statistics and a 3-month course on Data User Services. A new workshop on the Integrated Microcomputer Processing System (IMPS) also will be introduced.

The technical courses are offered on a regular schedule at ESAYTEC headquarters in Washington, D.C. They include 7-month modular courses in the following areas: Economic

Development Statistics, Population Censuses and Surveys and Computer Data Systems. As mentioned above, a new 3-month course in Data User Services also will be offered. The 7-month modular courses will run from September 1989 through April 1990. However, beginning in 1990, the 7-month courses will shift to a May to November schedule. Therefore, during the 1989-90 training year only, the 7-month modular courses will be offered twice: September 1989 to April 1990 and again from May 1990 to November 1990.

The 7-month courses will be conducted regularly on a May to November schedule beginning in 1990. The new 3-month course on Data User Services will be offered from January through March each year beginning in 1990.

Workshops and seminars are conducted in Latin America at the subregional or national level. The schedule of workshops and seminars varies each year. Two workshops are planned for 1989. The first will be held at the Universidad del Valle in Cali, Colombia, on the Integrated Microcomputer Processing System. A workshop on Effective Data-User Data-Producer Interface will be conducted; however, the place and date have not yet been decided. The workshop will be announced separately.

A summary of activities for 1989-1990 appears below.

Workshop on the Integrated Microcomputer Processing System (IMPS), July-August 1989, in Cali, Colombia.

7-Month Modular courses from September 1989 to April 1990 and from May to November 1990:

- Economic Development Statistics
- Population Censuses and Surveys
- Computer Data Systems

3-Month course on Data User Services, January to March 1990.

III. OBJECTIVES AND TRAINING METHODS

The program is designed to provide practical training for professionals who have responsibility for data collection and processing operations and for those engaged in research and analysis. The principal objectives of ESAYTEC are to:

- Train statisticians and computer professionals in the variety of skills needed to plan and conduct surveys, censuses and numerous other statistical activities;
- Train managers of these activities in the techniques and technologies required to produce reliable and timely data in a cost-effective manner;
- Train data users in how to define data needs and to use data effectively in social and economic policy-making; and
- Train all of these professionals in the

knowledge and skills needed to support the application of advanced computer technologies, such as microcomputers, to the improvement of statistical systems.

These objectives are achieved through a program that has an applied, practical orientation in all aspects of design and implementation. In workshops and modular courses, participants learn by doing; classroom work includes case studies, exercises, demonstrations, and hands-on practice in order to make training as close as possible to real-world situations. Principles and theory also are presented to provide a basis for practical applications. Participants' own experiences are used extensively in the training process.

Special attention is given to ensuring that what is learned at ESAYTEC is actually transferred to the participant's job after returning home. Aside from making the training as applied as possible, an in-depth diagnosis of training needs and background is done upon arrival for each participant attending the modular courses. This forms the basis for setting realistic training objectives and identifying the most appropriate curriculum of courses. A Training Advisor is assigned to each participant to assist him or her in setting training objectives and to provide guidance in achieving them.

Participants are encouraged to bring projects and work materials from home to serve as

examples in class projects. In some cases, participants will be able to return home with a finished product or solution to a particular problem that they brought with them. Action planning exercises, whereby participants develop specific plans and ideas on how to apply classroom learning to problems they face back home, are included in the training. Participants attending the modular courses are required to take a course on design and delivery of training. The course aims to equip them with the skills they need to train others after returning home, thus promoting an important multiplier effect.

A program of post-training follow-up further ensures that the training is relevant and is being transferred to the participant's job after returning home. Technical visits and consultations by instructional staff with graduates are arranged in conjunction with seminars and workshops when possible.

Participants complete follow-up questionnaires to evaluate the training they have received and to make suggestions for improvements. Graduates also are encouraged to maintain correspondence with the instructional staff regarding their progress. This follow-up program generates valuable information for evaluating the effectiveness of the training and making any necessary improvements.

Close communication with the Latin American statistical community is another critical

element in achieving the program's objectives. This is done through regular consultation with national statistical organizations, data user organizations, and donor organizations of all types that are involved in development efforts. Whenever possible, collaborative training efforts are arranged with other institutions in the region.

IV. PROGRAM LOCATION AND SCHEDULE OF ACTIVITIES

The ESAYTEC headquarters are located at the Census Bureau's training facility in the suburbs of Washington, D.C. All of the 2- to 7-month technical courses are conducted there. Seminars and workshops are carried out at cooperating institutions in Latin America. Seminars and workshops on topics of particular interest to a country, agency, or project can be designed and presented upon request.

Seven-Month Modular Programs

The full training program, including initial orientation, the winter recess, and pre-departure activities, requires 7 1/2 months. Most participants will derive maximum benefit from the program by attending the entire 7 1/2 months of training. Each specialization consists of three modules, with progressively more advanced material presented in each. The first module is 3 months long and the second and third modules are each 2 months in duration. The modules are interrelated, and the knowledge and skills acquired in

successive modules are to a large extent cumulative.

A calendar of activities appears on the inside cover of this booklet. It lists the major elements of the modular programs and their dates. One week of general orientation to the United States at the Washington International Center and at the Bureau of the Census precedes the technical training. Special orientation arrangements can be made for persons who come to ESAYTEC for programs beginning after the first module. Participants should schedule their arrival in the U.S. approximately 10 days before the training program begins to allow time for orientation and to make their housing arrangements.

Participants have the opportunity to attend a Mid-Winter Community Seminar organized by the National Center for International Visitors during the Christmas holiday recess. This is a cultural program involving seminars, tours, and home hospitality in a major city outside the Washington, D.C. area.

An important part of the training is the Management-Communications Seminar. This is a 1-week seminar that is conducted during a field trip outside the Washington, D.C. area.

Short-Term Modular Programs

Maximum benefit can be obtained by attending the complete program consisting of three modules. However, individuals who cannot attend the full

7-month program may enroll in short-term programs consisting of one or two modules. The various options available are presented below.

MODULE 1 ONLY. This module provides the basis for the more advanced courses in Modules 2 and 3. This option is recommended only for individuals whose job responsibilities do not allow them to be away for the full 7 months.

MODULE 2 ONLY. It is recommended that this module be taken together with Module 3. The courses offered in Module 2 are closely related to those in Modules 1 and 3. The activities involved in the survey workshop are initiated in Module 2. Enrollment in Module 2 alone is recommended only for individuals with solid experience and educational background in the area of study, and whose work responsibilities do not allow them to be away more than 2 months. It is also feasible to take Module 2 when planning to continue with Module 3 the following year.

MODULES 1 AND 2. Module 1 provides basic background knowledge and in Module 2 planning is undertaken for the survey workshop. This option should be considered only when the candidate's work responsibilities do not permit an absence of more than 5 months.

MODULES 2 AND 3. This alternative can be considered for individuals with a great deal of experience and education in the area of study. It should be noted that even senior staff

can benefit greatly from attending the full program. In general, few individuals are strong in all of the areas covered in Module 1. For senior staff who attend Module 1, arrangements can be made to do substitute courses and projects in those areas in which they are particularly qualified.

MODULE 3 ONLY. This alternative is recommended only for individuals who previously attended Module 2.

Whenever an individual attends only the first part of the program it is recommended that plans be made to continue the training as soon as possible. This will ensure the maximum benefit both for the institution and the candidate. When workshops are conducted in Washington, D.C. immediately before or after a given module, it will be possible to attend the workshop in conjunction with the module.

Special restrictions apply to persons wishing to enroll in a short-term modular program in Computer Data Systems. This program uses microcomputers extensively and the courses in Modules 2 and 3 build upon the basic training given in Module 1. Even those individuals with previous experience with minicomputers and mainframe computers will have difficulty without the background given in Module 1. Therefore, we recommend that all training programs in the Computer Data Systems course include Module 1 as a minimum.

3-Month Data User Services Course

This course runs for 3 months and is divided into four parts. The course is designed to be taken in its entirety; therefore, participants are only accepted for the full course.

Seminars and Workshops

Two workshops are planned during the period from May 1989 to April 1990. As mentioned earlier, the first will be conducted at the Universidad del Valle in Cali, Colombia, on the Integrated Microcomputer Processing System. A workshop on Effective Data-User Data-Producer Interface also will be conducted; however, the place and date have not yet been decided. This workshop will be announced separately.

V. STAFF AND FACILITIES

The International Statistical Programs Center (ISPC) of the Census Bureau provides the staff and facilities for ESAYTEC. All staff are fluent in Spanish and most have extensive experience working as technical advisors in Latin America and other regions of the world. Staff from the domestic programs area of the Census Bureau are available to share with participants the latest technologies and statistical methodologies used by the Bureau.

ESAYTEC takes full advantage of the unique combination of instructional resources that exist in the Washington, D.C. area. The full-time staff are augmented by guest lecturers and

resource people drawn from other agencies in the U.S. statistical system and the numerous international donor and development organizations based in Washington, D.C. Major international organizations with headquarters in Washington include the World Bank, International Monetary Fund, Inter-American Development Bank, Organization of American States, and the Pan American Health Organization. Official visits are arranged to many of these organizations to give participants a better understanding of their activities, especially in areas related to statistics and data processing. During their field trip to New York City, participants enrolled in the modular course visit the offices of various United Nations agencies.

The ISPC training center is located near Census Bureau headquarters in Marlow Heights, a suburb of Washington. In addition to classrooms, the training center includes mainframe computing facilities, three microcomputer laboratories, a cartographic laboratory, a library of Spanish-language references and periodicals, and various amenities for participants.

The staff assists participants in obtaining living accommodations. There are several nearby apartment complexes that are linked to the training center by shuttle bus; however, the availability of these apartments is sometimes limited. Apartments located in Washington offer an alternative and can be reached by a

combination of public transportation and shuttle bus.

VI. ELIGIBILITY REQUIREMENTS

Modular Programs

The ESAYTEC training programs are conducted primarily for statisticians and technicians who have at least 1 year (preferably more) working experience in national statistical programs. Persons employed in the private sector should have a similar level of experience in work related to the type of ESAYTEC training they intend to pursue. The formal educational background of participants may range from completion of high school to advanced university degrees. Academic training in mathematics, statistics, and economics is desirable; at least a good knowledge of basic algebra is required.

The modular course is an intensive training program that requires considerable time and effort to complete successfully. Participants are evaluated and graded in most courses they take, including compulsory courses in statistical methods and sampling. Therefore, individuals who are nominated to attend the modular course should be adequately prepared for a challenging training program.

In addition to these general eligibility requirements, there are specific candidate requirements for each specialization. It should be noted that all candidates for enrollment in the training program must also fulfill the

requirements of their sponsoring agencies.

Data User Services Course

In general, the only requirement is that participants have sufficient experience in the data user services area. Participants should be working in jobs with major technical or management responsibility in data dissemination and provision of services to users.

Seminars and Workshops

The eligibility requirements for seminars and workshops will depend upon the particular topic being covered. Generally, the only requirements will be that participants have adequate experience and background in the area of discussion. Any additional requirements will be specified when seminars and workshops are announced.

VII. DIPLOMAS AND CERTIFICATES

A diploma is awarded by ESAYTEC upon satisfactory completion of the full 7-month modular curriculum in any of the specializations offered. To complete the curriculum in any area of specialization, a participant must satisfactorily complete a minimum number of courses, as specified by the participant's Training Advisor. The required courses for the areas of specialization offered are indicated in the recommended curriculum in Part Two.

Completion of the curriculum also requires that participants arrive in the United States early enough to begin Module 1

on time. Sponsors are cautioned that if they nominate participants who lack basic mathematical skills, these persons will have difficulty with the required statistical methods and sampling courses.

A certificate is awarded upon successful completion of a workshop, seminar, the Data User Services course or partial completion of a modular course. For the modular programs, an official transcript of grades for each course satisfactorily completed will be provided, regardless of the length of the participant's program.

VIII. COST AND SPONSORSHIP

Technical Courses

The costs of attending a technical course at ESAYTEC include international travel, subsistence, and course fees. Course fees include the ISPC program fee, computer usage fees, fees for training provided by agencies other than ISPC, transportation for program-related travel in the U.S., books, and shipping of books upon completion of training. Approximate fees for the technical courses are listed below.

7-Month Modular courses--
September 1989 to April 1990:

Modules 1, 2, and 3 (full
7-month program) \$ 9,900

Modules 1 and 2 (5 months)
\$ 7,300

Modules 2 and 3 (4 months)
\$ 5,100

Module 1 only (3 months)
\$ 3,600

Module 2 only (2 months)
\$ 2,100

7-Month modular courses--May
1990 to November 1990:

Modules 1, 2, and 3 (full
7-month program) \$ 8,700

Modules 1 and 2 (5 months)
\$ 6,500

Modules 2 and 3 (4 months)
\$ 4,400

Module 1 only (3 months)
\$ 3,500

Module 2 only (2 months)
\$ 2,100

3-Month course on Data User
Services:

The approximate fees for the
complete course are \$4,900.

Depending upon the policy of the
sponsoring agency, costs also
will be incurred for the
purchase of calculators and
health insurance.

Course fees are paid directly to
ISPC by the participant's
sponsoring agency. Possible
sponsors include Missions of the
U.S. Agency for International
Development (or the U.S. Embassy
in countries where there is no
AID representative); the United
Nations Development Program,
Fund for Population Activities,

or another of the UN specialized agencies; the World Bank; the Inter-American Development Bank; the Organization of American States; The Pan American Health Organization; private foundations or business enterprises; or an agency of the participant's own government. The U.S. Bureau of the Census has no fellowship funds nor can we make recommendations to a sponsoring agency on behalf of a prospective participant.

The sponsoring agency also pays a subsistence allowance to the participant, either directly or through the administrative office of ISPC. A supplemental stipend usually is provided to cover exceptional costs during the first month of the training program and while the participant is engaged in program-related travel. The amounts of the regular and supplemental subsistence allowances vary slightly by sponsor.

All participants are required to have health insurance. If the sponsoring agency does not provide it, the participant will be responsible for obtaining his or her own health insurance policy. The ISPC staff will assist in making insurance arrangements.

Seminars and Workshops

The cost of attending overseas workshops and seminars depends upon arrangements with the sponsoring agency and the topic and duration of the training. Financial arrangements for the IMPS workshop in Cali, Colombia, were not final at the time this booklet went to print. This

information will be announced separately as soon as it is available. In the meantime, individuals interested in attending the workshop should fill out and return the application form appearing at the end of this booklet.

IX. PROCEDURES FOR OBTAINING FUNDING AND NOMINATING CANDIDATES

As explained above, the Census Bureau does not have fellowship funds nor can we request funding for a specific candidate. Individuals and organizations interested in participating in ESAYTEC training are responsible for identifying a source of funds and for completing the paperwork required to obtain them. This section provides some suggestions on how to seek funding and summarizes the procedures to follow for the principal sources of training funds.

We strongly recommend that those interested in attending one of the technical courses begin seeking a source of funds at least 6 months prior to the beginning of the course.

Therefore, funding requests should be initiated no later than March for the modular courses that begin in September and no later than June for the Data User Services course, which begins in January 1990. Three to four months lead time should be allowed for obtaining funding to attend workshops or seminars.

General Procedure

Following is an outline of the major steps in obtaining funding

and nominating candidates to attend ESAYTEC. Information on specific sponsoring agencies is given in the next section.

Step 1. Individual or organization identifies a training need and an appropriate ESAYTEC training activity. In the case of an organization, the candidate or candidates also must be selected.

Step 2. Complete application form that appears on the last page of this booklet and send to ISPC. After reviewing applications, ISPC will extend a conditional acceptance to qualified applicants. The acceptance will be conditional upon ISPC receiving official written confirmation of funding from a sponsoring agency.

Step 3. Obtain necessary approval or clearance from other organizations.

In many government agencies, the nominating organization must receive approval or clearance from another government agency prior to submitting a request for funding to a donor. For example, the national statistical office may have to receive approval from the ministry of planning before requesting funding for its candidates.

Step 4. Send a written request for funding to a potential sponsor.

In some countries this may be done directly by individual

candidates or nominating organizations. In many cases, however, all requests for overseas training must be made through a designated ministry, such as the ministry of planning or foreign affairs.

Regardless of the funding agency to whom the request is directed, it should include the following information as a minimum: a detailed description of the training activity to which the nomination pertains; the estimated cost; a summary of the candidate's qualifications; and a brief justification of how the training would benefit the organization and the work it does.

Step 5. Once funding is approved, the sponsor should send an official nomination to ISPC.

This nomination, which may be sent by letter or by cable, should state that the sponsoring agency will fund the training requested. It should also provide, at minimum, a brief outline of the candidate's education, experience, and current duties.

Step 6. Assuming that there is space available in the training course requested, ISPC will officially notify the sponsor of the candidate's acceptance by letter or cable. Further information regarding arrival dates and accommodations will be provided at that time.

Note that the primary responsibility for evaluation and selection of candidates

rests with the sponsoring organization and the organization that employs the candidate. The ISPC conducts only a general review of candidate qualifications to ensure that they meet the minimum requirements as outlined in this booklet.

Step 7. Upon receipt of the official acceptance from ISPC, candidates must obtain a visa, make travel arrangements, and obtain any other clearances required in order to travel overseas.

Specific Procedures

United Nations

Requests for funding and nominations for training are handled by the resident country representative of the United Nations Development Program (UNDP). The various United Nations agencies fund development projects in a given country within the framework of an overall country program. The duration of country programs varies from 2 to 5 years.

Individuals or organizations interested in training should contact the local UNDP office to determine whether there is a project in progress that includes funds for training in the appropriate area. If there is a project, the next step is to fill out a UN nomination form. The UNDP will forward the nomination form to the appropriate executing agency for review. The UN executing agencies that usually fund training in the area of applied

statistics and data processing technology include the Fund for Population Activities (UNFPA), the Food and Agriculture Organization (UNFAO), the Department for Technical Cooperation for Development (UNTCO), and the UN Education, Science, and Culture Organization (UNESCO).

While it is much easier to obtain funding under an ongoing project that includes a training component, it is possible to make a special request for such funding. If the current country program does not include projects that will fund training in the area of applied statistics and data processing, the host country may officially request that funds be made available under the next country program.

Organization of American States

The OAS funds training in two ways; in conjunction with a technical project development in a given country or under the OAS Regular Training Program (PRA). All training requests should be made through the OAS resident country representative. Contact the OAS representative to determine whether there are any technical projects in progress that include funds for the desired training. The OAS office can provide further information on the nomination process.

The PRA provides full scholarships for training lasting 3 months or more. Candidates are selected by an advisory board that meets in June and October each year at

OAS headquarters in Washington. Applications and related documents should be submitted no later than April 30 of each year for the June selection of candidates and by August 31 for the October selection. Applications and other information about PRA can be obtained from the OAS resident representative in each country.

U.S. Agency for International Development

The AID funds training in two ways; through technical assistance projects that have a training component and through separate training projects. Training funds may be available in countries that have an AID Mission under a bilateral program of assistance. These include Bolivia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Panama, and Peru. Training funds also may be available through the U.S. Embassy in countries with an AID representative. These include Brazil, Colombia, Mexico, Paraguay, and Uruguay.

In countries with AID Missions, individuals or organizations interested in obtaining funding for training should contact the Education Officer or Training Officer in the mission. A joint committee of AID and host country officials reviews all requests and decides whether funding will be granted. In countries with an AID representative, requests for funding should be directed to him.

For candidates sponsored by AID, the mission or AID representative should send a PIO/P and biographical data to AID/Washington for transmittal to the Census Bureau.

Inter-American Development Bank (IDB) and World Bank

These organizations do not provide direct funding for training. Loans made by the banks may support development projects with training components. The banks periodically send missions to the countries to review development needs and to prepare a country program of assistance. Projects to support the development of statistical and data processing capability, including training, must be requested by the appropriate officials of the recipient country when the country program is being discussed with bank missions.

Projects supported by loans from the IDB or the World Bank are administered by agencies of the recipient country government. Information concerning the availability of funds for training therefore must be obtained through the appropriate executing agency.

Other Sources of Funding

There are a number of other potential sources of funding for the training offered by ESAYTEC. Due to the wide variation in policies and procedures, it is not practical to provide details here. A partial list of other

potential sources of funding appears below.

- Pan American Health Organization;
- Private foundations such as Ford, Rockefeller, Tinker, and Hewlett;
- Private business firms; many firms provide funding for employees to improve their skills through job-related technical training.

X. OTHER CONSIDERATIONS

Participants are requested to bring with them materials used in their jobs and materials that describe the statistical programs in which they may be engaged. Examples of pertinent materials include questionnaires, instructions, descriptions of procedures, publications, evaluation studies, etc. These materials will be of practical value to participants throughout their training, whether they are attending modular courses, seminars or workshops.

For the purpose of relating training objectives to the candidate's future job responsibilities, it is strongly recommended that the objectives and content of the proposed training program be discussed in detail by the candidate, the candidate's supervisor, and a representative of the sponsoring agency prior to departure from the home country. For those who will attend the modular program, this process will be aided by a

packet of diagnostic materials designed to help prospective participants evaluate their training needs and begin to develop specific training objectives.

XI. ADDITIONAL INFORMATION

For further information about how to obtain funding, contact the country or regional representative of one of the sponsoring organizations mentioned previously. To obtain more information about the ESAYTEC program, please fill out the form in the last page of this booklet and send it to ESAYTEC. The information required to contact ESAYTEC by mail, telephone, telex or FAX appears below.

If you would like more information about the English training program, please fill out the form on the last page of this booklet.

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16

PART TWO

**DESCRIPTION OF TECHNICAL COURSES
SCHEDULED DURING THE PERIOD
MAY 1989 TO APRIL 1990**

XII. NEW MODULAR COURSE IN ECONOMIC DEVELOPMENT STATISTICS--7 MONTHS

Training Objectives

The objective of the course in Economic Development Statistics is to provide participants with the knowledge and skills needed to plan and conduct a variety of economic surveys and censuses. Participants receive training in planning and implementing data collection activities for the traditional and nontraditional sectors of an economy. Participants are also trained in the development of indicators of economic activity, basic economic theory, and the use of economic data for national planning purposes. Applications of microcomputers to the collection and analysis of statistical data are taught throughout the course.

Who Should Attend

This course is designed for professionals working in organizations that have responsibility for collecting and using economic statistics. These may include a wide variety of government agencies, such as the national statistical office, central bank, ministry of planning, or ministry of finance. In addition, attendance at one or more modules of this course may be useful to professionals working in universities, research institutions, or private sector organizations who wish to improve their understanding of how economic statistics are collected and analyzed.

Training Plan

The 7-month program is divided into three modules. The first module is 3 months in duration and the second and third each last 2 months. Depending upon the trainee's needs, the modules may be taken individually or in various combinations. Training methods include formal lectures, seminars, laboratory sessions, take-home study assignments, and individual study projects.

A preliminary outline of the Economic Development Statistics curriculum appears on the next page. To request a detailed description of courses, please fill out and send to ISPC the form appearing at the back of this booklet.

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This course is designed for professionals working in organizations that have responsibility for collecting and using economic statistics. These may include a wide variety of government agencies, such as the national statistical office, central bank, ministry of planning, or ministry of finance. In addition, attendance at one or more modules of this course may be useful to professionals working in universities, research institutions, or private sector organizations who wish to improve their understanding of how economic statistics are collected and analyzed.

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**NEW MODULAR COURSE IN
ECONOMIC DEVELOPMENT STATISTICS (Continued)**

<u>Tentative Curriculum Outline</u>	<u>Classroom Hours</u>
Module 1 -- September 12 to December 15, 1989	
Part One:	
400 Microeconomic Concepts for Statisticians.....	20
401 Elements of Economic Surveys and Censuses.....	10
201-1 Introduction to Statistical Methods.....	25
205 Design of Tables and Questionnaires.....	20
	75
 Part Two:	
402 Macroeconomic Concepts for Statisticians.....	20
404 Economic Accounting.....	15
405 Measures of Economic Activity.....	15
211 Laboratory in Design of Tables and Questionnaires.	30
112 Computer Data Processing Concepts.....	20
202 Introduction to Survey Sampling.....	35
201-2 Introduction to Statistical Methods--Continued....	20
	155
 Module 2 -- January 3 to February 23, 1990	
406 Small-Scale and Household Industries.....	20
407 Foreign Trade Statistics.....	20
206 Editing, Coding, and Imputation Techniques.....	30
208 Development of Operational Documentation.....	20
214-1 Survey Operations Workshop.....	10
216 Regression and Correlation Analysis.....	20
113 Microcomputer Applications for Census-Survey Operations.....	30
	150
 Module 3 -- March 5 to April 27, 1990	
403 Special Topic Seminar.....	10
408 Role of Economic Statistics in National Development.....	20
207 Quality Control of Census-Survey Operations.....	20
210 Data Dissemination and User Interface.....	20
212 Design and Delivery of Training.....	20
213 Management of Statistical Activities.....	20
214-2 Survey Operations Workshop.....	40
	150

XIII. MODULAR COURSE IN POPULATION CENSUSES AND SURVEYS--7 MONTHS

Training Objectives

The objective of the Population Censuses and Surveys curriculum is to provide participants with the knowledge and skills required to collect and process population statistics. Participants learn how to plan and implement a population census or survey, as well as methods for improving the overall quality of existing data collection programs. This course is intended to support the development of staff to plan and conduct the 1990 round of population censuses in the hemisphere.

Who Should Attend

This program is intended for professional personnel working in population censuses, household surveys, demographic surveys, fertility surveys, and vital statistics. The types of professionals who can benefit from this program of training are listed below.

Statisticians who wish to improve their skills and knowledge in the collection and processing of population data.

Managers of population censuses or survey programs who need to improve their skills in one or more of the following areas: data collection, data processing, and management of statistical activities.

Demographers who wish to acquire skills and knowledge in the collection and processing of population statistics.

Candidate Requirements

Participants must have a good knowledge of basic algebra and should have some working experience (at least a year) in a statistical organization. Formal education background may range from completion of high school to advanced university degrees. Academic training in mathematics, statistics, sociology, and demography is especially helpful. Participants who begin the program in Module 2 must have previous education or experience equivalent to the training offered in Module 1. The knowledge and skills acquired in the first two modules are cumulative and provide the foundation for the advanced work in Module 3. Individuals are discouraged from taking Module 3 unless they have taken Module 2, as a minimum.

Training Plan

The 7-month program is divided into three modules. Training methods include classroom work, seminars, conferences, and discussion and laboratory sessions. The classroom work gives participants the basic knowledge and skills to collect and process population statistics. Modules 1 and 2 focus on the methods and techniques used in the collection and processing of survey-census data. Module 3 emphasizes the management of statistical programs and related topics such as data user interface. A recommended curriculum for participants specializing in Population Censuses and Surveys appears on the next page. To request a detailed description of courses, please fill out and send to ISPC the form appearing at the back of this booklet.

**MODULAR COURSE IN POPULATION CENSUSES
AND SURVEYS (continued)**

<u>Recommended Curriculum</u>	<u>Classroom Hours</u>
<u>Module 1 -- September 12 to December 15, 1989</u>	
Part One:	
300-1 Statistics and Population Analysis.....	20
200 Introduction to Census-Survey Methodology.....	20
205 Design of Tables and Questionnaires.....	20
201-1 Introduction to Statistical Methods.....	25
	85
Part Two:	
300-2 Statistics and Population Analysis--Continued.....	20
302 1990 World Census Population and Housing.....	15
201-2 Introduction to Statistical Methods--Continued....	20
202 Introduction to Survey Sampling.....	35
211 Laboratory in Design of Tables and Questionnaires.	30
112 Computer Data Processing Concepts.....	20
	140
<u>Module 2 -- January 3 to February 23, 1990</u>	
204 Geography and Mapping for Census and Surveys.....	20
206 Editing, Coding, and Imputation Techniques.....	30
208 Development of Operational Documentation.....	20
214-1 Survey Operations Workshop.....	10
215 Sampling-Mapping Laboratory.....	30
113 Microcomputer Applications for Census-Survey Operations.....	35
	145
<u>Module 3 -- March 5 to April 27, 1990</u>	
306 Special Topics Seminar.....	15
207 Quality Control of Census-Survey Operations.....	20
210 Data Dissemination and User Interface.....	20
212 Design and Delivery of Training.....	20
213 Management of Statistical Activities.....	20
214-2 Survey Operations Workshop.....	40
	135

XIV. MODULAR COURSE IN COMPUTER DATA SYSTEMS

Training Objectives

The purpose of Computer Data Systems curriculum is to provide participants with skills and knowledge in the following three areas: design, development and implementation of automated systems; increased productivity and effectiveness of data processing organizations and computer centers; and improved understanding of the role of data processing in the organization and of the coordination necessary between the computer staff and subject-matter staff.

Upon completion of this training, participants will be ready to work as computer programmers or systems analysts. However, depending upon the individual's previous experience, he may require a certain level of supervision while he transfers or adapts newly acquired knowledge to real life situations faced in his own country.

Who Should Attend

This program is intended for junior- to intermediate-level programmers. Some prior experience or training in data processing would be useful, particularly in a statistical processing environment. Those individuals with extensive experience in programming or systems analysis and design also can benefit greatly from this program. They can take advantage of the opportunity to fill gaps in their knowledge and to update their skills in other areas. It will be possible for these individuals to substitute other studies for areas in which they already have sufficient experience and training.

Candidate Requirements

All candidates must have completed secondary-level education and must have a good knowledge of basic algebra. Work experience in computer data systems is not required for participants taking Module 1. Participants who wish to begin the program with Module 2, however, must have work experience equivalent to the training offered in Module 1. The knowledge and skills acquired in the first two modules are cumulative and provide the foundation for the advanced work in Module 3. Individuals are discouraged from taking Module 3 unless they have taken Module 2 as a minimum.

The training will be conducted in Spanish; however, most of the technical terminology is in English and some of the most

up-to-date texts are available only in that language. Therefore, participants should have good reading ability in English.

Training Plan

The 7-month program is divided into three modules. The first module is 3 months in duration and the second and third each last 2 months. Training methods include formal lectures, laboratory sessions, take-home study assignments, visits to different organizations for demonstrations of advanced technology, and individual study projects.

Field trips are made to various organizations to expose participants to the latest products, current technology, and different organizational structures. Organizations visited include large-scale telecommunication and computer facilities, selected vendors, and manufacturers of equipment and systems. To request a detailed description of courses, please fill out and send to ISPC the form appearing at the back of this booklet.

MODULAR COURSE IN COMPUTER DATA SYSTEMS (continued)

<u>Recommended Curriculum</u>		<u>Classroom Hours</u>
Module 1 -- September 12 to December 15, 1989		
Part One:		
100	Computer Data Processing Fundamentals.....	15
103-1	Microcomputer Applications for Statistical Processing.....	20
104	Operating Concepts and Utilities.....	30
200	Introduction to Census-Survey Methodology.....	20
201	Introduction to Statistical Methods.....	25
		<u>110</u>
Part Two:		
101	Fundamentals of Structured Programming.....	30
106	Census Tabulation System (CENTS 4).....	40
103-2	Microcomputer Applications for Statistical Processing.....	40
202	Introduction to Survey Sampling.....	35
211	Laboratory in Design of Tables and Questionnaires.	30
		<u>175</u>
Module 2 -- January 3 to February 23, 1990		
102-1	Structured COBOL.....	55
105	Analysis and Design of Computer Systems.....	30
107-1	Survey Processing Workshop.....	15
108	Generalized Editing and Imputation Concepts (CONCOR).....	55
206	Editing, Coding and Imputation Techniques.....	30
		<u>185</u>
Module 3 -- March 5 to April 27, 1990		
102-2	Structured COBOL--Continued.....	55
107-2	Survey Processing Workshop.....	40
115	Advanced Microcomputer Applications.....	40
212	Design and Delivery of Training.....	20
		<u>155</u>

XV. NEW COURSE IN DATA USER SERVICES--3 MONTHSTraining Objectives

In the face of increasing demands for more and better data, statistical agencies must improve their ability to disseminate data and to provide adequate support to data users. The purpose of this course is to equip staff of institutions that produce statistical data with the skills required to organize and conduct an effective data user services program. Participants receive training in product development, marketing strategies, dissemination media and technologies, organization of user training and outreach activities, and overall coordination of a data user services program. In the final part of the course they develop a data user services program for their countries and a plan for implementing it upon their return.

Who Should Attend

This course is designed for employees of statistical organizations whose professional responsibilities include one or more of the following activities: planning and preparing statistical reports and products; disseminating statistical data; training and assisting data users; and providing other outreach services. The target audience includes technical staff working in these areas and managers who have responsibility for some aspect of data user services.

Attendance in this course would be useful for individuals working in national statistical offices and other governmental agencies that produce statistical data. These may include central banks and ministries of agriculture, education, health, and labor.

Training Plan

This course combines traditional classroom training in concepts and skills with site visits to a variety of organizations in the U.S. that provide services to users outside of statistical agencies. The course consists of four parts. The first is an introduction to the assumptions and objectives guiding the development and implementation of a data user services program. In the second part, the various components of a data user program are examined. This is followed by a series of site visits to various agencies in the Washington area and throughout the U.S.

The knowledge and experience gained in the first three parts provide a basis for studying practical considerations in

implementing a data user services program in the countries of Latin America. In the fourth and final part of the course participants develop marketing plans and proposals for a data user services program in their countries. They also receive training in effective communication of ideas and information.

A preliminary outline of the Data User Services course appears on the next page.

24

PART THREE

**DESCRIPTION OF WORKSHOPS SCHEDULED DURING
THE PERIOD MAY 1989 TO APRIL 1990**

XVI. INTEGRATED MICROCOMPUTER PROCESSING SYSTEM (IMPS)

Date and Location

This workshop will be conducted at the Universidad del Valle in Cali, Colombia, from July 24 to August 18, 1989.

Target Audience

This workshop is designed for systems analysts and computer programmers who work with statistical applications. Participants should have prior experience using microcomputers, and preferably experience with a programming language.

Description

The Integrated Microcomputer Processing System (IMPS) makes it possible to perform the entire range of processing tasks for a census or survey on microcomputers. Developed by staff of ISPC, the IMPS system is designed to allow persons with little or no computer experience to contribute to data processing. IMPS consists of software packages that have been linked together. The functions performed by IMPS and the packages used for each is given below.

Data Entry -- CENTRY, Census data entry system

Editing -- CONCOR, Editing and imputation system

Tabulation -- CENTS, Census tabulation system

Statistical analysis -- PC-CARP, Statistical analysis and variance calculations

Demographic analysis -- CPDA, Computer programs for demographic analysis

Management of processing -- CENTRACK, Census tracking system

The workshop is designed to enable participants to determine appropriate applications of the IMPS system, to install it, and to use it to process data from a census or survey. Participants also will acquire an improved understanding of the steps required for processing a census or survey and of the coordination necessary between computer staff and subject matter staff.

The workshop will give participants a working knowledge of CENTRY, CONCOR, CENTS, and CENTRACK. Demonstrations will be given of the other software. Tuition for the workshop includes a copy of all software and associated users guides.

XVII. EFFECTIVE DATA-USER DATA-PRODUCER INTERFACEDate and Location

This workshop is 2 weeks in duration and will be conducted in Latin America during 1989. The exact date and location have not yet been determined. This information will be announced separately.

Target Audience

Managers and senior technical staff in organizations that produce data and user data. It is desirable to have users and producers participate together as a team. Countries should send groups that include both data users and data producers who work, or will work together, on the same statistical activities.

Description

The objective of this workshop is to teach data producers and data users how to work together effectively in three key areas: (1) definition of data needs; (2) presentation of data; and (3) dissemination and use of data. Participants will learn how to convert these into tabulation plans and questionnaires that produce the data needed. The use of effective presentation techniques, including tables, graphs, charts, and maps will be discussed and practiced. The development of regular channels of communication between users and producers and a program of data user services also will be discussed.

Data users and data producers attending the workshop will be encouraged to use this opportunity to learn from each other. The workshop will promote this process through team exercises, role plays, and simulations.

Subject to the availability of hardware and software, microcomputer applications for presentation and dissemination of data will be demonstrated.

PART FOUR

**OTHER SEMINARS AND WORKSHOPS
AVAILABLE**

XVIII. ILLUSTRATIVE LIST OF OTHER SEMINARS AND WORKSHOPS AVAILABLE

ESAYTEC can offer a variety of seminars and workshops to help meet specific needs. Seminars and workshops can be arranged upon request for topics of interest. Cost estimates and other details can be obtained by contacting ISPC (see page 15). An illustrative list of topics appears below.

Data Collection Methods

- Design of Tables and Questionnaires
- Preparation of Manuals and Operational Documentation
- Preparation of Computer Processing Specifications
- Organization and Control of Field Operations
- Design and Implementation of Training
- Microcomputer Applications for Management of Survey-Census

Sampling and Statistical Methods

- Survey Sample Design
- Introduction to Statistical Analysis of Data
- Control and Evaluation of Nonsampling Error

Computer Data Processing

- CONCOR (CONSistency and CORrection software package)
- CENTS IV (CENSus Tabulation System software package)
- Data Processing Project Management
- Systems Analysis and Design

Dissemination and Use of Data

- Planning and Implementation a Data User Services Program
- Microcomputer Applications for Effective Presentation and Dissemination of Data
- Use of Social and Economic Data for Policymaking

Population Statistics

- Planning and Organizing a Census of Population
- Design and Implementation of a Household Survey Program

Economic Statistics

Microcomputer-Based Information Systems for the External
Sector (Foreign trade and tourism)
Agriculture Censuses and Surveys

Evaluation Studies

Design of Studies to Evaluate the Impact of Development
Projects
Demographic Methods for Evaluation of Census Data
Post-Enumeration Surveys for Censuses of Population
Statistical Methods for Measuring Content Error in Censuses
of Population

SOLICITUD DE INFORMACION ADICIONAL

Nombre: Nombre

Apellido

Organismo donde Trabaja

Dirección

Teléfono del Trabajo

Cable/Telex

Información que Solicita

- Copia del folleto de ESAYTEC
 Copia del folleto del programa en inglés
 Descripción Individual de una materia (*Especifique el no. de la materia según el folleto*)

Otra Información

(Pare aquí — envíelo a la dirección que aparece en la parte inferior del dorso de la página)

SOLICITUD CURSOS ESAYTEC 1989—1990: PRIMERA PARTE

Nombre: Nombre

Apellido

Sexo

- Hombre
 Mujer

Edad

Programa de Capacitación que se Solicita: (sólo uno, por favor)

- Curso modular que comienza en septiembre de 1989
Especifique nombre del curso

Especifique módulos

- Curso modular que comienza en mayo de 1990
Especifique nombre del curso

Especifique módulos

- Curso sobre Servicios a los Usuarios de Datos (3 meses); de enero a marzo de 1990
 Taller de trabajo sobre IMPS; en Cali, Colombia; de julio a agosto de 1989

Breve Descripción de sus Objetivos de Capacitación

(Los candidatos deben rellenar la parte de atrás de este formulario)

35

SOLICITUD CURSOS ESAYTEC 1989-1990: SEGUNDA PARTE

Dirección Particular

Nombre y Dirección de su Trabajo

Teléfono del trabajo

Cable/Telex

Puesto que Desempeña

Años en Cargo

Principales Obligaciones

Obligaciones que se Esperan de Usted al Terminar la Capacitación

Puesto que Desempeñó Anteriormente

Años

Nombre del Organismo donde estuvo empleado

Educación (empezando con la más reciente; incluyendo universidades, cursos técnicos y capacitación vocacional)

Nombre de la Institución	Area de Especialización	Grado	Fecha Conferido

Firma del Candidato

Fecha

ENVIEN EL CORREO A



ESAYTEC
International Statistical Programs Center
U.S. Bureau of the Census
Washington, D.C. 20233