

# Training Course on Data Processing Using Census and Survey Processing System (CSPro)

The data processing is responsible for manual editing and coding of questionnaires, data entry, computer editing and tabulation of products like the population database for all Surveys and Censuses. The data processing division has established its editing, coding and data entry in different spaces of place.

The **Census and Survey Processing System (CSPro)** is a tool for entering, editing, tabulating and disseminating data from surveys and censuses. CSPro is a package developed jointly by the U.S. Census Bureau, Macro International, and Serpro, SA. The underlying manual will describe the data entry procedures as well as the relevant features of the CSPro software.

## **COURSE OBJECTIVES (Expected outcome)**

Participants will understand about questionnaire, concept of data processing and will be able to develop the data entry program and produce the data files from CSPro to other data files in different formats of the small surveys and assessments for the basic course and also will be able the preparation of data correction between the first entry and second entry as well as develop the data cleaning programs of the large surveys and Censuses for the advance course.

## **WHO SHOULD ATTEND?**

The course is designed for data processing coordinators/supervisors/data entry operators, all level of persons who has the basic computer knowledge at least and who committed to work related to data processing of the survey or census.

## **COURSE CONTENTS**

### **I. Basic Course**

Day 1: (7 hours)

Introduction to the course	- Flow chart of Data Processing
Data Processing and Data Collection	- Field operation - Data editing and coding - Data entry
Data Cleaning	- Independent/Dependent Verification Data Correction of the Add and Verify modes Data correction of Range and Consistency Checks - Tabulation plan - Data analysis in different formats
Overview of CSPro	- Features Doing with Data entry, editing, tabulation, and dissemination - Widespread Use Processing of censuses and surveys of any size - History Combining the features of two previous - DOS-based software packages, IMPS and ISSA.

## Day 2: (7 hours)

Creating Dictionary	<ul style="list-style-type: none"><li>- What is a Dictionary?</li><li>- CSPro Data Files</li><li>- Identification Items</li><li>- Meaningless/Meaningful IDs</li><li>- ID Examples</li><li>- Dictionary Fundamentals</li></ul>
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Creating Dictionary (cont.)	<ul style="list-style-type: none"><li>- Naming Dictionary Elements</li><li>- Levels/Records</li><li>- Multiply-Occurring Records in the Data File</li><li>- Item/Item Representations/Sub items</li><li>- Value Set/Special Values</li></ul>
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Exercise 1
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## Day 3: (7 hours)

Creating Dictionary (cont.)	<ul style="list-style-type: none"><li>- Documenting Dictionary Elements</li><li>- Relative Positioning</li><li>- Absolute Positioning</li></ul>
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Creating Dictionary (cont.)	<ul style="list-style-type: none"><li>- Relative vs. Absolute Example</li><li>- Modifying the Dictionary</li><li>- Adding Fields to the Dictionary</li><li>- Modifying Item Lengths and Dictionary Macros</li></ul>
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Exercise 2
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## Day 4: (7 hours)

Creating Forms	<ul style="list-style-type: none"><li>- Data Entry Options</li><li>- Data Entry Files</li><li>- Forms</li><li>- Form Elements</li><li>- Order of Execution</li></ul>
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Creating Forms (cont.)	<ul style="list-style-type: none"><li>- Rosters</li><li>- Roster Properties</li><li>- Field Properties</li><li>- Form Design Options</li><li>- Computer-Assisted Personal Interviewing</li><li>- Extended Controls</li></ul>
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Exercise 3
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## Day 5: (7 hours)

Planning a Data Entry Operation	<ul style="list-style-type: none"><li>- Creating the Application</li><li>- Operator and System Controlled Modes</li><li>- Operator-Controlled Mode</li><li>- System-Controlled Mode</li><li>- Skips</li></ul>
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Planning a Data Entry Operation (cont.)	<ul style="list-style-type: none"><li>- Order of Entry</li><li>- Network Data Entry</li><li>- Testing the Application</li><li>- During Data Entry</li><li>- Keyer Efficiency</li><li>- Verifying Data</li><li>- Basic code</li><li>- Independent Verification</li></ul>
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Data Export to other formats	<ul style="list-style-type: none"><li>- SPSS</li><li>- STATA</li><li>- Excel etc.</li></ul>
Exercise 3	

There are 35 hours to complete the basic course of CSPro

## II. Advance Course (continue from basic course)

### Day 6: (7 hours)

Creating batch for message error	<ul style="list-style-type: none"><li>- Range Check</li><li>- Consistency Check</li><li>- Basic and Intermediate codes</li></ul>
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Creating batch for writing the data output	<ul style="list-style-type: none"><li>- Input Data File</li><li>- Output File</li><li>- Write File</li><li>- Impute Freq File</li><li>- Listing File</li><li>- Basic and Intermediate codes</li></ul>
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Exercise 4	
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### Day 7: (7 hours)

Creating then Dependent Verification	<ul style="list-style-type: none"><li>- Data entry option</li><li>- Force to accept the value</li><li>- The verify mode is to get the final data</li></ul>
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Creating then Independent Verification	<ul style="list-style-type: none"><li>- Two data files come from different operators</li><li>- Any one file of two can be chosen to correct</li><li>- Compare data with data dictionary and the two data inputs</li></ul>
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## Exercise 4

Day 8: (7 hours)

Creating then Independent  
Verification (cont.)

- Input file
- Referenced Files
- Listing File
- Comparison method
- Comparison order

Data Cleaning, Export Data and  
Practice

- Create and Edit Logic
- Choose Items
- Universe
- Number of Files Created
- Output of Multiple Record Occurrences
- Export Record Type
- Export Items or Subitems
- Additional Options
- Export Format (SPSS and Stata)

There are 21 hours to complete the advance course of CSPro after the basic course

Phnom Penh, 02 September 2014

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Saint Lundy  
Data Processing Specialist