

# Classes

## basic random sampling

**This course is designed to introduce auditors to basic sampling techniques other than monthly block sampling. Appropriate use of sampling techniques contributes to reduced audit cost, reduced travel cost, improved audit results, and makes audits more defensible if challenged.**

### **OBJECTIVE:**

To provide participants with an understanding of basic random sampling techniques and how they are applied to sales and use tax audits. When the course is completed the auditor should be able to apply the basic principles and conduct a random sample. This course is a prelude to Statistical Sampling for Sales and Use Tax Audits and it is recommended that this course be taken first.

### **AUDIENCE:**

The course is designed as a basic course for state and local sales & use tax auditors, supervisors and review section personnel.

### **PREREQUISITES:**

Ability to use spreadsheet software on a personal computer.

### **STUDENT REQUIREMENTS:**

Each participant is required to have a laptop computer with a CD-Drive or a free USB port to enable the sharing of files with a jump drive. Excel 97 may be used but it is recommended that at Excel 2000 or above is installed, however having Excel 2007 installed may cause confusion with it new user interface. Some of the material is based on Excel VBA which requires the VBA functionality enabled. Students should also be able to adjust the security level to a low setting or it should be preset to a level that will accept macros.

**WARNING:** Failure to comply with the student requirements may prevent the student from being able to participate in many of the class examples and exercises. Students should check with their IT Departments to insure their computers are in compliance.

### **PROGRAM LEVEL:**

Beginning

### **PROGRAM CONTENT:**

Introduction to basic random sampling techniques and their application to sales and use tax audits.

### **COURSE MATERIALS:**

Participants will receive a comprehensive course binder which includes the course materials, questions, and exercises. Participants will also receive a copy of the MTC sampling software.





## **ADVANCE PREPARATION:**

None

## **INSTRUCTIONAL DELIVERY METHOD:**

Group-Live with exercises and comprehensive case study.

## **RECOMMENDED CPE CREDIT:**

16 hours

## **REGISTRATION INFORMATION:**

Contact Antonio Soto at [asoto@mtc.gov](mailto:asoto@mtc.gov) or (202) 508-3846

## **PROGRAM DAY ONE: 8:00 AM – 5:00 PM**

### **General Overview of Sampling**

1. Detail Audits versus Sampling
2. Block versus Random
3. Probability Samples
4. Non-statistical Sampling Overview
5. Matching Random Numbers to the Sampling Frame - Correspondence
6. Target Population, Sampling Frame and Sampling Unit
7. The Target Population versus the Sampling Frame
8. Sampling Designs
9. Other Sample Designs
10. Is Projecting the Sample Results Appropriate?

### **Construction of Sampling Frames**

1. Electronic Populations
2. Refining the Population and Designing the Sampling Frame
3. Matching Positives with Negatives

### **Random Sampling Using MTC Software**

1. Random and Pseudorandom Numbers
2. Mechanics of Random Number Sampling
3. Sampling Frames where No Electronic File is Available
4. Sampling Frames with the Electronic File

## **PROGRAM DAY TWO: 8:00 AM – 5:00 PM**

1. Random Sampling Using MTC Software...*continued*
2. Non-statistically Projecting the Sample
3. Comprehensive Case Study
4. Wrap-up

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**We encourage states to host this course along with Computer Assisted Audit Techniques Using Excel —during the same week**

**“I hope that both instructors will teach another class I can attend.”**

**- A student at the April 2007 Non-statistical sampling course in Louisiana**

