

Statistical Sampling for Sales and Use Tax Audits

This course is the first step to understanding and applying statistical sampling techniques. Appropriate use of sampling techniques contributes to reduced audit cost, reduced travel cost, improved audit results, and makes audits more defensible if challenged by taxpayers.

OBJECTIVE:

To provide participants with 1) the skills necessary to conduct a statistical sample; and, more importantly 2) an understanding of basic statistical sampling theory as it relates to sales and use tax audits. When the course is completed the auditor should be able to apply the basic principles and conduct a statistical sample. However, this course should be viewed as the first step, and not the final step, in obtaining a thorough understanding of statistical sampling.



AUDIENCE:

The course is designed as an intermediate/advanced course for state and local revenue department personnel (sales & use tax auditors, supervisors and review section personnel) and private sector practitioners who are auditing sales and use tax records or representing taxpayers in sales and use tax audits.

PREREQUISITES:

Familiarity with sampling concepts, including the following: mean, standard deviation, stratification of populations, and random sampling of populations. It is also helpful if the participant has some exposure to the concepts of normal distribution and regression analysis, which are usually included in a basic college-level statistics class. Students should be interested in learning statistical theory in addition to the mechanics of sampling.

STUDENT COMPUTER REQUIREMENTS:

Each participant is required to have a laptop computer with Excel 2010, and a CD-Drive or a free USB port to enable the sharing of files. 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 that their computers are in compliance.

PROGRAM LEVEL: Intermediate/Advanced

COURSE MATERIALS:

Participants will receive a comprehensive course binder which includes the course material, questions, exercises and case studies. Participants will also receive a copy of the MTC Sampling Software.

ADVANCE PREPARATION:

Install and test MTC Sampling Software; and read Lesson 5 from the course materials.

INSTRUCTIONAL DELIVERY METHOD: Group-Live with problem sets.

RECOMMENDED CPE CREDIT: 32 hours

FIELD OF STUDY: Statistics ([View the Fields of Study](#))

REGISTRATION INFORMATION:

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

PROGRAM DESCRIPTION

DAY ONE: 8:00 AM – 5:00 PM

Introduction

- I. General Overview of Statistical Sampling
- II. Random Sampling Using MTC Software

PROGRAM DAY TWO: 8:00 AM – 5:00 PM

- III. Defining and Refining the Population
- IV. Statistical Evaluation Using Software

PROGRAM DAY THREE: 8:00 AM – 5:00 PM

- V. Constructing & Using a Confidence Interval
- VI. Statistical Concerns Related to Audit Sampling
- VII. The Estimators

PROGRAM DAY FOUR: 8:00 AM – 5:00 PM

- VII. The Estimators -- continued
- VIII. Stratified Random Sampling
- Comprehensive Problem
- Wrap-up