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, more accurate audit results, and makes audits more defensible if challenged by taxpayers.

OBJECTIVE:

At the end of this course, students will be able to 1) apply statistical sampling concepts to conduct a statistical sample; and, more importantly 2) be able to explain basic statistical sampling theory as it relates to sales and use tax audits. 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 basic Excel functions, such as copy, paste and sort; and familiarity with sampling concepts, including 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 (2007 or newer preferred), 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 computer requirements may prevent the student from participating 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 Sherry Tiggett at stiggett@mtc.gov or (202) 650-0296

PROGRAM DESCRIPTION

DAY ONE: 8:00 AM – 5:00 PM

Introduction
General Overview of Statistical Sampling
Random Sampling Using MTC Software
Defining and Refining the Population

PROGRAM DAY TWO: 8:00 AM – 5:00 PM

Defining and Refining the Population (continued)
Statistical Evaluation Using Software
Go over Comprehensive Problem

PROGRAM DAY THREE: 8:00 AM – 5:00 PM

Comprehensive Problem
Constructing & Using a Confidence Interval
The Estimators

PROGRAM DAY FOUR: 8:00 AM – 5:00 PM

The Estimators -- continued
Stratified Sampling
Avoiding Bias
Bonus Problem
Wrap-up