



Workshop 551 – Valuation of Machinery and Equipment

Course Description

This workshop is designed to provide a formal, systematic, comprehensive program of study for those who assess personal property, specifically machinery and equipment. The very nature of most personal property item provides a challenge in proper valuation – the diversity, mobility or adaptability, and the forces affecting value of personal property frequently make it far more difficult than real property to discover, list and value. The end goal in the appraisal of machinery and equipment is an estimation of market value that is both accurate and equitable. There are three accepted approaches to value. The content of this workshop includes specific application of the three approaches. As will be demonstrated, the cost approach is far and away the most commonly used for most machinery equipment. In order to apply the cost approach, certain information must be obtained, and this may be accomplished in two primary ways: audit appraisal and physical appraisal.

The workshop utilizes lectures, classroom discussion, and homework problems to emphasize the main concepts and procedures taught in the course. The six sections of the course present a broad mixture of theory and practical application. Exercises are included so the student can test and reinforce new skills. Time is allotted for questions and answers throughout the course. Students are encouraged to participate actively.

This course provides a comprehensive program of study for those who assess personal property for ad valorem tax purposes. The following topic areas will be covered during this week long course:

1. Introduction; Course Outline & Objectives
2. The Appraisal Process
3. The Cost Approach
4. The Sales Comparison Approach
5. The Income Approach
6. Correlation/Reconciliation

This course consists of eighteen and half hours of classroom instruction and a final examination. A certified IAAO instructor will guide you through learning aids, which may include lectures, discussions, case problems, drills, review quizzes, and demonstrations.

Objectives

On completion of Chapter 1, the student should be able to:

- Recognize and understand the underlying economic theory supporting the cost approach method to valuation
- Identify the steps of the cost approach
- Identify the restrictions under which the cost approach will generate the best estimate of market value
- Identify conditions under which the cost approach is inappropriate
- Know the formula for the cost approach
- Understand the definitions of cost, i.e., direct, indirect, replacement, reproduction, historical and original

- Know the four traditional methods of estimating cost, i.e., quantity survey, unit-in-place, comparative unit, and trended original cost

On completion of Chapter 2, the student should be able to:

- Define depreciation
- Identify the three types of depreciation
- Identify the two indirect methods of measuring depreciation, i.e., sales comparison and capitalization of income
- Identify three direct methods used to measure depreciation

On completion of Chapter 3, the student should be able to:

- Identify the two indirect methods of measuring depreciation, i.e., sales comparison and capitalization of income using single property appraisal techniques.
- Recognize how mass appraisal methods can be used to develop depreciation through market modeling.
- Be able to apply both single property and mass appraisal methods of estimating depreciation through indirect methods.

On completion of Chapter 4, the student should be able to:

- Identify three direct methods used to measure depreciation
- Identify the three types of depreciation
- Understand the concept of estimating total economic life, effective age, and remaining economic life
- Identify and define the difference between physical deterioration incurable, both short-lived and long-live items
- Identify and define functional obsolescence (all forms) and external obsolescence

Timetable

| Topic | Time Requirement | Day Covered |
|-----------------------------------|------------------|-----------------------|
| Chapter 1 | | |
| Introduction & Class Orientation | 45 Minutes | Day One AM |
| Nature of Machinery and Equipment | 75 Minutes | Day One AM |
| Chapter 2 | | |
| Appraisal Process | 30 Minutes | Day One AM |
| Steps in the Valuation Process | 120 Minutes | Day One AM |
| Chapter 3 | | |
| Cost Approach Defined | 30 Minutes | Day One PM |
| Cost | 30 Minutes | Day One PM |
| RCN | 60 Minutes | Day One PM/Day Two AM |
| Depreciation | 60 Minutes | Day One PM/Day Two AM |
| Applying the Cost Approach | 180 Minutes | Day One PM/Day Two AM |

| Topic | Time Requirement | Day Covered |
|--|------------------|--------------|
| Chapter 4 | | |
| Sales Comparison Approach Defined | 30 Minutes | Day Two AM |
| Principle of Substitution | 30 Minutes | Day Two AM |
| Development of Adjustment | 60 Minutes | Day Two AM |
| Applying the Sales Comparison Approach | 60 Minutes | Day Two AM |
| Chapter 5 | | |
| Income Approach Defined | 60 Minutes | Day Two PM |
| Gross Income Multipliers | 60 Minutes | Day Two PM |
| Capitalization of Net Income | 120 Minutes | Day Two PM |
| Chapter 6 | | |
| Correlation and Reconciliation | 60 Minutes | Day Three AM |
| Exam | | |