Table of Contents

Overview................................................................................................................................. xi
Course Schedule ................................................................................................................... xv

SECTION 1

Part 1. Online Session: Level C Marketability Analysis for an Existing Office Building

Introduction .......................................................................................................................... 1
Level C Marketability Analysis for an Existing Office Building ........................................ 1
The Assignment .................................................................................................................. 5
Office Building Case Study Property ................................................................................. 6
Review Part 1 ...................................................................................................................... 29

SECTION 2

Part 2. Review of Market Analysis and Highest & Best Use Concepts and an Introduction to Level C Marketability Analyses

Preview Part 2..................................................................................................................... 31
Review of Significant Definitions ....................................................................................... 33
Two Analysis Methods Used to Measure Demand .............................................................. 34
Review of the Six-Step Process Used in Market Analysis ................................................ 38
When and Why Level C Marketability Analyses May Be Required .................................. 45
Reasons Why Level C Analyses May Show Different Indications than Level B Analyses ......................................................................................................................... 46
How Level C Marketability Analyses Differ from Level B Analyses ................................ 47
Market Analysis and Highest and Best Use ....................................................................... 47
Measuring Financial Feasibility ......................................................................................... 50
Use of Market Analysis in the Three Approaches to Value .............................................. 60
Review Part 2 ...................................................................................................................... 63
Part 3. Review of the Existing Office Building Case Study (Online Session)

- Preview Part 3 .............................................................................................. 65
- Review and Correction of Online Case Study: Level C Marketability Analysis of an Office Property ................................................................. 67
- Questions ..................................................................................................... 67
- Review Part 3 ............................................................................................... 69

Part 4. Introduction to Middleville: Community Profile

- Preview Part 4 ............................................................................................... 71
- Introduction and Overview of Middleville Community ................................. 73
- Use of Data Search Sheets ............................................................ 73
- Questions ..................................................................................................... 73
- Review Part 4. ............................................................................................... 75

SECTION 3

Part 5. Urban Structures and Linkages

- Preview Part 5 .............................................................................................. 77
- Introduction .................................................................................................. 79
- Forces Influencing Urban Structure ............................................................. 79
- Urban Structure Analysis and Urban Growth Models .................................. 81
- Predicting the Direction of Urban Growth .................................................. 92
- Urban Structures and Location Analysis ...................................................... 95
- Review Part 5. ............................................................................................ 105

Part 6. Economic Base Analysis

- Preview Part 6 ............................................................................................ 107
- Economic Base Fundamentals ................................................................. 109
- Economic Base Analysis (EBA) .............................................................. 112
- Steps in Economic Base Analysis ............................................................. 113
- Review Part 6. ............................................................................................ 127
Part 7. Real Estate Market Cycles

Preview Part 7 ................................................................. 129
Factors That Cause Real Estate Markets (and Property Values) to Change...... 131
Real Estate Market Cycles .................................................. 133
Valuation Applications: Where Do Cycles Fit into the Valuation Process? .... 135
Review Part 7 ................................................................. 137
PRACTICE TEST—Section 3 ................................................ 139

SECTION 4

Part 8. Apartment Complex with Excess Land: Steps 1–2

Preview Part 8 ................................................................. 143
Introduction to Middleville Apartment Case Study Property ....................... 147
Apartment Case Study Description ......................................................... 148
Step 1. Analyze Property Productivity .................................................... 162
Step 2. Delineate the Market Area ......................................................... 172
Review Part 8 ................................................................. 179


Preview Part 9 ................................................................. 181
Step 3. Measure Current Demand; Project/Forecast Demand..................... 184
Step 4. Measure and Forecast Competitive Supply .................................... 203
Step 5. Calculate Residual Demand ....................................................... 206
Step 6. Forecast Subject Capture ......................................................... 212
Review Part 9 ................................................................. 217

Part 10. Analysis for Conversion to Condominiums

Preview Part 10 ................................................................. 219
Condominium Conversion and Development Option ................................. 221
Condominium Use of Multiunit Residential Property ................................ 221
Issues to Consider ............................................................................. 221
Six-Step Level C Marketability Analysis Employed for Condominiums ........ 225
Step 1. Analyze Property Productivity .................................................... 225
Step 2. Delineate the Market Area ......................................................... 232
Step 3. Measure Current Demand; Project/Forecast Demand..................... 234
Part 10. Analysis for Conversion to Condominiums (cont.)

Step 4. Measure and Forecast Competitive Supply ........................................ 243
Step 5. Calculate Residual Demand ............................................................. 244
Step 6. Forecast Subject Capture................................................................. 245
Review Part 10. .......................................................................................... 249
PRACTICE TEST—Section 4 ......................................................................... 251

SECTION 5

Part 11. Retail Property: Steps 1–2

Preview Part 11 .......................................................................................... 253
Introduction—Case Study Property and Overview of the Six-Step Marketability

Analysis Process for Retail Property ............................................................. 255
Central Place Theory Applied to Retail Property ......................................... 259
Guidelines for Identification and Description of Retail Property ................. 260
Step 1. Analyze Property Productivity ......................................................... 263
Step 2. Analyze the Market of Users ........................................................... 279
Review Part 11. .......................................................................................... 289

Part 12. Retail Property: Steps 3–4

Preview Part 12 .......................................................................................... 291
Introduction ................................................................................................ 293
Step 3. Measure Current Demand; Forecast Demand .................................. 294
Step 4. Measure and Forecast Competitive Supply ..................................... 313
Review Part 12. .......................................................................................... 319

Part 13. Retail Property: Steps 5–6

Preview Part 13 .......................................................................................... 321
Step 5. Calculate Residual Demand .......................................................... 323
Step 6. Forecast Subject Capture ............................................................... 326
Application of Residual Demand Analysis to Highest and Best Use .......... 335
Application of Residual Demand Analysis in Valuation ............................. 339
Review Part 13. .......................................................................................... 341
PRACTICE TEST—Section 5 ......................................................................... 343
SECTION 6


Preview Part 14........................................................................................................349
Introduction—Six-Step Level C Marketability Analysis Process for
Industrial Property ................................................................................................351
Industrial Case Study Property Description ..........................................................353
Case Study Tasks ...................................................................................................356
Step 1. Analyze Property Productivity .................................................................356
Step 2. Identify the Market Areas and Property Users .........................................370
Review Part 14 .....................................................................................................375

Part 15. Industrial Property: Step 3

Preview Part 15......................................................................................................377
Theories of Industrial Demand Projection and Forecasting .................................379
Sources of Industrial Demand ..............................................................................380
Step 3. Project/Forecast Demand ........................................................................381
Review Part 15. ....................................................................................................395


Preview Part 16......................................................................................................397
Step 4. Measure and Forecast Competitive Supply .............................................399
Step 5. Calculate Residual Demand ....................................................................402
Step 6. Project/Forecast Subject Capture .............................................................404
Application of Marketability Analysis Conclusions to the Remainder of
the Valuation Process .........................................................................................411
Review Part 16. ....................................................................................................415
PRACTICE TEST—Section 6 ..............................................................................417
SECTION 7

Part 17. Vacant Land Parcel: Property Productivity Analysis

Preview Part 17......................................................................................................... 419
Introduction .............................................................................................................. 421
Property Productivity Analysis: Physical and Legal Characteristics ...................... 423
Property Productivity Analysis: Location Characteristics ....................................... 429
Review Part 17. ........................................................................................................... 437

Part 18. Vacant Land Parcel: Market Determinants of Use

Preview Part 18......................................................................................................... 439
Introduction .............................................................................................................. 441
Retail Market Area Defined ...................................................................................... 442
Market Analysis for Retail Use .............................................................................. 442
Market Analysis for Office Use .............................................................................. 446
Market Analysis for Industrial Use ........................................................................ 447
Market Analysis for Apartment Use ....................................................................... 447
Market Analysis for Townhouse Use ..................................................................... 449
Summary of Results ............................................................................................. 453
Review Part 18. ........................................................................................................... 455

Part 19. Vacant Land Parcel: Highest and Best Use Analysis

Preview Part 19......................................................................................................... 457
Introduction .............................................................................................................. 459
Consideration of Risk ............................................................................................. 459
Model Input and Procedure ................................................................................... 460
Analysis of Six Suggested Models ......................................................................... 461
Highest and Best Use.............................................................................................. 467
Valuation Applications ........................................................................................... 470
Review Part 19. ........................................................................................................... 473
## SECTION 8

### Part 20. Considerations: The Importance of Property Productivity Analysis and Market Area Delineation

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preview Part 20</td>
<td></td>
<td>475</td>
</tr>
<tr>
<td>Introduction</td>
<td></td>
<td>477</td>
</tr>
<tr>
<td>Steps 1 and 2: Relationships to Steps 3–6</td>
<td></td>
<td>477</td>
</tr>
<tr>
<td>Additional Examples of the Six-Step Process</td>
<td></td>
<td>490</td>
</tr>
<tr>
<td>Review Part 20</td>
<td></td>
<td>499</td>
</tr>
</tbody>
</table>

### Part 21. Additional Applications of Market Analysis

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preview Part 21</td>
<td></td>
<td>501</td>
</tr>
<tr>
<td>Type of Analysis</td>
<td></td>
<td>503</td>
</tr>
<tr>
<td>Site Selection Case Study Data</td>
<td></td>
<td>503</td>
</tr>
<tr>
<td>Step 1. Analyze Property Productivity</td>
<td></td>
<td>505</td>
</tr>
<tr>
<td>Step 2. Delineate the Market Area</td>
<td></td>
<td>505</td>
</tr>
<tr>
<td>Additional Discussion of Market Analysis for Use in Site Selection</td>
<td></td>
<td>509</td>
</tr>
<tr>
<td>Market Analysis for New Product Supply/Demand Analysis</td>
<td></td>
<td>512</td>
</tr>
<tr>
<td>Review Part 21</td>
<td></td>
<td>519</td>
</tr>
</tbody>
</table>

## SECTION 9

### Part 22. Exam Content Review

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Information for the Exam</td>
<td></td>
<td>521</td>
</tr>
<tr>
<td>Guidance on Studying for the Final Exam</td>
<td></td>
<td>521</td>
</tr>
<tr>
<td>Guidance on Taking the Final Exam</td>
<td></td>
<td>521</td>
</tr>
<tr>
<td>Test-Taking Strategies</td>
<td></td>
<td>522</td>
</tr>
<tr>
<td>Instructor-Led Review of Concepts, Definitions, and Problems</td>
<td></td>
<td>522</td>
</tr>
</tbody>
</table>

## APPENDIX

Commercial Green and Energy Efficient Addendum
Overview

Course Description

Welcome to Advanced Market Analysis and Highest & Best Use. This course is intended for those who have taken and passed the General Appraiser Market Analysis and Highest & Best Use course and have a thorough understanding of the mathematical and financial principles necessary to perform appraisals of income-producing properties. This course combines the analytical processes of market analysis, highest and best use, and income valuation.

The classroom portion of the course begins with a review of market analysis and highest and best use concepts. Following this introduction is a discussion of the online assignment, in which participants worked through a Level C marketability analysis for an office property. Then the course focuses on the market conditions in a fictional city, Middleville, which is introduced in the first morning of the classroom session. The economic base of Middleville is explored and it is used as the subject and example for both physical and economic forces that affect all communities and consequently all real estate.

The remainder of the course consists of four case studies that demonstrate both the power of fundamental market analysis and its application to highest and best use decisions.

The first case study is an existing apartment property that faces the prospect of continued rental or conversion to condominium. Only through fundamental market analysis can an analyst understand the forces of demand for each distinctive use.

The next case study is an existing retail property and the third case study is an existing industrial property that is functioning in an environment of declining demand due to a change in the economic base. The changes in employment characteristics for the community directly affect the marketability of the case study property and only fundamental market analysis can reveal such conditions.

The final case study is a vacant parcel of land that could be developed for mixed use. The options for development are not limited to the uses; they must include the amount of space designated for each use. The amount becomes a function of timing, and it is shown that only through fundamental market analysis can the timing, and consequently the highest and best use, be revealed.

The question of highest and best use is ever present in analyzing markets. Market analysis is used in making decisions about highest and best use for both land as though vacant and property as improved. Because it is used as a screening process for highest and best use, market analysis is necessary to provide both an understanding of and a basis for highest and best use.
The course emphasizes that market analysis is integral to highest and best use, and highest and best use is integral to market value. Without adequate market analysis, a highest and best use conclusion cannot be reliable. Without a reliable highest and best use conclusion, a market value appraisal cannot be credible.

**Important Notes**

- **Diagnostic Test Prerequisite.** To complete courses in the advanced education curriculum successfully, it is important that participants have basic spreadsheet skills. Therefore, before enrolling in an advanced education course, each participant is required to pass a diagnostic test that demonstrates his or her skill level in creating and working with spreadsheets.

- **Blended Learning.** Each course in the advanced curriculum incorporates both online and live classroom education. A two-hour online session begins the course. While the content for each course is different, these online sessions all incorporate discussion and examples, and require participants to complete various tasks. By completing the online session, participants will have a better understanding of what to expect in the live classroom sessions that will follow. If the tasks are difficult, participants will have time to review and prepare before the live portion of the course begins. Tasks will not be graded; however, they must be completed to pass the course. The online session, which goes live 28 days before the classroom session begins, must be completed **BEFORE** the classroom session.

- **Excel Workbooks.** This course incorporates a variety of interactive learning activities, including Excel workbooks. Participants are required to download the necessary Excel files while completing the online session so that they have them when they begin the live classroom session of the course.

- **Digging Deeper.** Digging Deeper information goes beyond the scope of the course and is not intended to be covered in class. It is not tested on the course exam; however, appraisers preparing for the comprehensive exam should be familiar with it, as well as all other material contained in the Course Handbook, whether or not it is presented in class.
Learning Enhancements

The course has been designed with a variety of elements to enhance your learning experience.

- **Preview.** To give you a taste of what is to come, the Preview page at the beginning of each part includes a brief overview of the content, learning objectives to consider as you move through the content, and learning tips that will assist you in understanding the information you’re about to cover.

- **Learning Objectives.** Each learning objective covers the information and practices required for understanding the concepts in the course. Look over these objectives before the part begins so that you have a frame of reference as you move through the material. At the end of each part, reread the objectives. Are you able to do what is stated? If not, ask your instructor for help or review the concepts that you do not understand.

- **Excel Workbooks.** Many of the worksheets presented in the course for problem solving are provided in Excel (download). These are used during the course as an aid in problem solving. Many have embedded calculations. These are for simplicity, not for use as a crutch. It is most important that participants understand the logical and mechanical operations associated with the worksheets.

- **Examples and Problems.** To supplement the discussions, we’ve included examples and problems to help you visualize and practice what you are learning.

- **Review.** Each part concludes with a review, which includes the learning objectives and key terms and concepts that have been covered. Also, we’ve provided recommended readings that will reinforce what you have learned in class.

- **Practice Tests.** A Practice Test is included at the end of the most sections of the course. The questions are similar to the types of questions you might find on the exam. By answering the multiple-choice questions, you will find out whether you have mastered the information covered in the part.

Classroom Guidelines

To make the course a positive experience for everyone attending, we have some guidelines for your consideration:

- 100% attendance is required. No exceptions.

- Limit use of computers and wireless devices to classroom projects.

- Communicate with business associates during break time instead of class time.
• Put away reading materials such as newspapers and books that are not used in class.

• Silence cell phones.

• Use recording devices only if prior permission has been granted.

• Refrain from ongoing conversations with those seated near you and other distracting behavior.

General Information

• Calculators. A financial calculator is required. The accepted model used in the course is the HP-12C.

• Laptop computers. A laptop computer is required.

• Spreadsheet program: Excel 2007 or later. A spreadsheet program is required (participants may use other spreadsheet programs, but those programs won’t be supported in class; demonstrations will be done in Excel).

• Breaks. There will be two 10-minute breaks during the morning session and two 10-minute breaks during the afternoon session unless noted otherwise by the course sponsor. The lunch break is one hour.

• Attendance sheets will be distributed during class to verify your attendance during the morning and afternoon sessions.

• Certificates of completion will be emailed after completion of the course, and attendance during the entire course is required.

Required Text


Exam

• Multiple choice

• Please remember all laptops, cellular phones, tablets, iPads, wearable technology (smart watch, Apple Watch, Google Glass, etc.) and other devices that can store data or connect to the Internet are NOT permitted during the exam. In addition, all watches, wallets, bags, and purses must be removed and stored out of reach prior to taking the exam.