BUSI 460 Critical Analysis and Forecasting in Real Estate

PURPOSE AND SCOPE

The core objective of this course is to provide real estate professionals with a set of tools to foster their ability to offer advanced real estate advisory services. In this course, students will learn to undertake critical analyses that inform their clients' and employers' real estate decisions so as to optimize their risk/reward preferences.

People involved in acquiring, operating and managing, or disposing of real estate know that these activities involve complex and unpredictable interactions. Students contemplating careers in real estate need to consider how practitioners think about and solve decision-making problems. Effective application of critical analysis can help students clarify their roles in satisfying client needs.

The following examples illustrate areas in which real estate consultants might expect to provide advisory services:

- Valuation services that might range from single property appraisals to evaluating large and diverse portfolios, and completion of market analyses and feasibility studies in support of property development and investment decisions.
- Financial advisory services that might involve single asset or portfolio acquisitions, dispositions, or financing.
- Financial modeling services including the analysis of assets, development opportunities, and new business opportunities.
- Due diligence activities through undertaking market surveys, site inspections, operating statement analysis, normalization of income statements, and lease abstracts.
- Litigation support services including valuation consulting, producing expert reports, and credible testimony.

To provide such real estate advisory services, the consultant needs to develop the necessary "meta-skills" to:

- Effectively communicate with clients and project team members.
- Think strategically and critically.
- Carefully define problems.
- Develop and support effective arguments.
- Conduct effective research.
- Select and apply the most appropriate analytical methodologies to synthesize best conclusions that enhance a client's real estate decision analysis.
- Act as a change agent.

The focus on critical analysis in this course will delve into two quantitative decision making methodologies: decision analysis and forecasting. These methodologies will be explored through the framework of market studies, customized to client objectives through case studies. Through exercises, case studies, and an in-depth project, participants will acquire a working knowledge of these methodologies and the ability to determine their appropriate use and limitations.
The specific goals of this course are to enable the participant to:

- Critically analyze the context for real estate problems, creating an effective foundation for further in-depth analysis of issues.
- Effectively apply traditional and online research skills.
- Critique and interpret market analyses and forecasts prepared by others.
- Accurately diagnose complex real estate problems.
- Identify and support potential real estate solutions, goals, and actions which are objective and comprehensive, facilitating sound decision-making by clients.
- Synthesize complex analyses and articulate findings in thoughtful reports.
- Develop the "meta-skills" necessary to succeed in the real estate service supply chain.

**LESSON 1 – Critical Analysis**

1. Describe the key concepts of creative critical thinking in the context of the real estate profession.
2. Identify the key biases that affect the decision making process and recognize their own biases.
3. Apply the basic tools of disciplined thinking in real estate practice.
4. Recognize mental models (your own and others) and their importance to creative critical thinking.
5. Enhance client service by helping clients make the best decisions in their business context.

**LESSON 2 – Decision Framing: Finding the Most Effective Question for your Client**

1. Recognize that uncertainty and multiple attributes are inherent complexities in real estate decisions;
2. Recognize that many real estate decisions involve multiple stakeholders with different interests;
3. Recognize the limitations of traditional framing perspectives;
4. Recognize the need for a systematic decision-making process due to cognitive limitations;
5. Apply a sound process for framing decisions;
6. Describe how decision framing can incorporate complexities of various types;
7. Structure decision problems; and
8. Incorporate clients' needs in framing decisions.

**LESSON 3 – Research Methods**

1. Distinguish between quantitative and qualitative research;
2. Plan research to address a real estate business problem;
3. Identify real estate information sources;
4. Critically evaluate information and sources;
5. Recognize biases in collecting and synthesizing information; and
6. Distinguish between persistent, or repeatable, events and one-time events, and be able to anticipate "surprise" events in a real estate context.

**LESSON 4 – Making Decisions Involving Uncertainty**

1. Identify the key uncertainties that affect the outcomes of a decision under consideration.
2. Categorize the different levels of uncertainty that affect future outcomes.
3. Develop a working knowledge of decision analysis tools: decision trees and influence diagrams.
4. Explain the difference between uncertainties that occur rarely (e.g., one-time events or "surprises") and those that occur routinely ("persistent" events) for which data on past outcomes is available.

LESSON 5 – Choosing the Right Decision-Making Technique

1. Explain the importance of identifying the best approach to decision making.
2. Describe the strengths and weaknesses of four different approaches to decision making.
3. Select among four approaches the best decision making technique for the task at hand – i.e., the simplest technique sufficient to satisfy client requirements.
4. Apply decision analysis concepts to decisions involving multiple objectives.

LESSON 6 – Introduction to Statistical and Judgment Forecasting in Real Estate

1. Explain the principles necessary for systematically evaluating forecasting methods and models.
2. Identify the roles that judgment and statistical forecasting play in real estate decision making.
3. Critically analyze forecasting methods: their strengths, limitations, and appropriate use.

LESSON 7 – Understanding Data Patterns and Forecasting Techniques

1. Identify and analyze data patterns and characteristics.
2. Select appropriate analytical and forecasting techniques to address critical factors in real estate decision making.
3. Measure and interpret forecasting error in statistical forecasting models.
4. Determine the adequacy of a forecasting technique for statistical modelling.

LESSON 8 – Forecasting Model Application and Results Evaluation

1. Develop and critique a multiple regression model.
2. Interpret regression coefficients.
3. Test the significance of a regression.
4. Explain how multicollinearity might affect model results and interpretation.
5. Select the "best" regression equation from various alternatives.
6. Test for autocorrelation in time series multiple regression models.
7. Apply judgmental forecasting methods.
8. Exercise critical thinking in selecting and analyzing forecasting methods.
9. Discuss the professional valuation standards issues associated with use of valuation models using time series forecasting.

LESSON 9 – Demographic Forecasting and Psychographic Analysis

1. Discuss the importance (and limitations) of demographic forecasting in real estate decision making.
2. Explain the risks of not including economic and behavioural changes in demographic analyses.
3. Explain how psychographic analysis can add value to real estate decision-making.
4. Develop, interpret, apply, and critique results from demographic analyses in real estate decisions.
5. Provide clients with context-specific advice adapted to their situation and property, going beyond general advice regarding economic, demographic, and behavioural conditions.

LESSON 10 – Risk Analysis and Learning from Auditing Experience

1. Identify risk and describe how it can be managed in real estate decision analysis and forecasting.
2. Develop risk action plans.
3. Describe risks and recommendations in terms of the client's risk profile.
4. Appreciate the necessity of "learning from experience", in terms of how auditing decision and risk management processes can help you convert experience into learning.

LESSON 11 – Real Estate Consulting in Practice (BUSI 460 Major Project)

1. Formulate a problem carefully:
   - Recognize most relevant issues, and prioritize and focus on tasks to be resolved.
   - Put the immediate issues into the larger context of the client's objectives.
   - Assess both the importance and urgency of issues in terms of the client's objectives.
   - Identify and categorize a variety of causes contributing to a specific effect or outcome.
   - Distinguish between facts and assumptions, and develop reasonable assumptions.
   - Assess the impact of assumptions made on decisions, actions, and implementation plans, and be able to develop alternative scenarios if an assumption is found to be incorrect.
2. Undertake research to effectively resolve problems and support conclusions and recommendations:
   - Identify missing relevant information, assessing its potential availability, location, time and cost of collection, and impact of the missing information on the decision and action plans.
3. Apply the forecasting and decision analysis methods covered in this course to a practical real estate-related problem:
   - Demonstrate an ability to apply decision-making and forecasting tools, theories, and techniques.
   - Demonstrate an understanding of the usefulness and limitations of the above.
   - Demonstrate creative skills in generating a list of potential alternatives.
   - Identify and prioritize qualitative and quantitative decision criteria that are relevant to the client's objectives.
   - Assess quantitative versus qualitative tradeoffs.
   - Demonstrate decision-making ability by showing how to move appropriately from analytic to decision mode.
   - Look ahead to consequences flowing from decisions, forecasting quantitative and qualitative outcomes.
   - Plan a series of actions which lead to a desired result, tying the financial, physical, human, and technological resources to a chronology with a specific deadline.
4. Prepare a report that effectively communicates ideas and results.
5. Demonstrate the application of meta-skills in addressing a client's real estate decision analysis.