

**FINANCE 673**  
**REAL PROPERTY VALUATION I**

Department of Finance  
Mays Business School  
Texas A&M University

**SPRING SEMESTER 2010**

**COURSE SYLLABUS AND OUTLINE**

**Instructor:** Dr. Thomas O. Jackson, AICP, MAI, CRE, FRICS  
**Class Hours:** 12:45 to 2:00 p.m. Mondays and Wednesdays in Room 182, Wehner Building  
**Office Hours:** By Appointment  
**Office Phones:** 979-690-1755 (Real Property Analytics, Inc.) or 979-458-4519 (Mays Business School)  
**Email:** [tomjackson@real-analytics.com](mailto:tomjackson@real-analytics.com) or [tjackson@mays.tamu.edu](mailto:tjackson@mays.tamu.edu)  
**Course website:** [www.real-analytics.com/FINC\\_673/index.html](http://www.real-analytics.com/FINC_673/index.html)

**Course Description**

Real property valuation underlies many areas of real estate, including appraisal, development, finance and investment. Students with career aspirations in any of these areas will benefit from an understanding of valuation principles, methods and techniques.

More specifically, the emphasis of Finance 673 is on the valuation of income producing properties through income capitalization techniques of direct capitalization, yield capitalization and discounted cash flow analysis. In addition to overall property valuation, this course addresses the valuation of partial interests, including mortgage and equity interests, land and building components, and the interests of landlords and tenants. Upon completion of this course, the student will have an array of techniques at his or her disposal to analyze and estimate the value of income producing real estate.

While Finance 673 primarily addresses income capitalization techniques, Finance 674, Real Property Valuation II, addresses related valuation topics including the analysis of sales and cost data, and continues to develop proficiencies in income capitalization analysis techniques through case studies.

**Course Materials**

*The Appraisal of Real Estate, 13th Edition*, Appraisal Institute, 2008.

Clifford E. Fisher, Jr., *Rates and Ratios Used in the Income Capitalization Approach*, Appraisal Institute, 1995 (recommended).

*The Dictionary of Real Estate Appraisal, 5th Edition*, Appraisal Institute, 2010 (recommended).

Material to be downloaded from the course website and other material handed out in class.

Material on reserve at West Campus Library.

# FINANCE 673 REAL PROPERTY VALUATION I COURSE SYLLABUS AND OUTLINE

## Evaluation of Student Performance

Homework Assignments	20%
Midterm Examination	40%
Final Examination	40%

## Course Outline

### **1. Valuation Concepts and Definitions**

Readings: *The Appraisal of Real Estate, 13th Edition*, pp. 5-10, 15-32

- a. Real estate, real property and personal property
- b. Price, cost and value

### **2. Valuation Process**

Readings: *The Appraisal of Real Estate, 13th Edition*, pp. 129-144; reserve/download materials

### **3. Highest and Best Use**

Readings: *The Appraisal of Real Estate, 13th Edition*, pp. 277-289

- a. Highest and best use as though vacant
- b. Highest and best use as improved

*(Class and take home practice problems about here)*

### **4. Income and Expense Analysis**

Readings: *The Appraisal of Real Estate, 13th Edition*, pp. 469-498; reserve/download materials

- a. Income and expense data
- b. Reconstructed operating statements

### **5. Replacement Reserves**

Readings: *The Appraisal of Real Estate, 13th Edition*, pp. 459, 490-492; reserve/download materials

- a. Short and long lived building components
- b. Methods (percentage of NOI, straight line, sinking fund)

*(Homework assignment 1 about here)*

## **FINANCE 673 REAL PROPERTY VALUATION I COURSE SYLLABUS AND OUTLINE**

### **6. Income Capitalization Concepts**

Readings: *The Appraisal of Real Estate, 13th Edition*, pp. 445-450, 465-467, 499-517, 520-524;  
*Rates and Ratios Used in the Income Capitalization Approach*, pp. 1-6

- a. Direct and yield capitalization
- b. Types of income to be capitalized
- c. Market value and investment value
- d. Ellwood formula and Akerson format

### **7. Direct Capitalization I**

Readings: *The Appraisal of Real Estate, 13th Edition*, pp. 499-517; *Rates and Ratios Used in the Income Capitalization Approach*, pp. 8, 10, 12, 14, 16, 18, 20; download materials

- a. Overall rates ( $R_0$ ) for direct capitalization
- b. Multipliers and ratios (NIR, NIM, OER, PGIM, EGIM)
- c. Built-up and blended overall rates (land and buildings, debt and equity, leased fee and leasehold)
- d. Residual techniques (land residual, building residual, equity residual)
- e. Debt coverage ratio (underwriter's method)

*(Class and take home practice problems about here)*

### **8. Direct Capitalization II**

- a. Advanced band of investment techniques and problems
- b. Advanced residual techniques and problems
- c. Advanced highest and best analysis

*(Homework assignment 2 about here)*

*(Midterm Examination about here)*

### **9. Projecting Cash Flows**

Readings: *The Appraisal of Real Estate, 13th Edition*, pp. 447, 450, 456-459, 463-465, 503, 526-528

- a. Gross and net leases
- b. Rental units of comparison

**FINANCE 673 REAL PROPERTY VALUATION I  
COURSE SYLLABUS AND OUTLINE**

- c. Vacancy and collection loss
- d. Operating expenses
- e. Replacement reserves in discounted cash flow format
- f. Expense pass through calculations
- g. Reversion calculations

*(Class and take home practice problems about here)*

*(Homework assignment 3 about here)*

**10. Discounted Cash Flow Analysis**

Readings: *The Appraisal of Real Estate, 13th Edition*, pp. 462-463, 466-467, 520-526, 528-538;  
*Rates and Ratios Used in the Income Capitalization Approach*, pp. 9, 11, 13, 15, 17, 19, 21

- a. Procedures and steps in DCF analysis
- b. Terminal capitalization rates
- c. Types of value that can be estimated through DCF analysis
- d. DCF model set up and calculations of value

*(Class and take home practice problems about here)*

**11. Yield Capitalization Models and Formulae**

- a. Yield and income capitalization rates
- b. Algebraic formula to solve for reversion
- c. Level income models
- d. Percentage change in value over holding period
- e. Perpetuities
- f. Changing income patterns
- g. Exponential curve
- h. Recapture assumptions

## **FINANCE 673 REAL PROPERTY VALUATION I COURSE SYLLABUS AND OUTLINE**

- i. Land and building residual analysis

*(Class and take home practice problems about here)*

### **12. Stabilizing Income**

- a. Stabilized income based on PV calculations
- b. Equivalent level income (ELI) based on K-factors
- c. Adjustment of  $R_0$  with K-factors

*(Homework assignment 4 about here)*

### **13. DCF with Debt Coverage Ratio**

*(Final Examination about here)*

### **Additional Information**

To the extent that some topics are not covered this semester, they will be included in Finance 674: Real Property Valuation II in the Fall Semester.

Except for clerical errors, all requests for re-grades of examinations or homework shall be made in writing on a form downloadable from the course webpage.

After review by the student, all examinations will be retained by the instructor.

Also, please note and heed the following:

Aggie Honor Code: *An Aggie Does Not Lie, Cheat or Steal or Tolerate Those Who Do.*

Refer to the Honor Council Rules and Procedures on the web at: <http://www.tamu.edu/aggiehonor/>