# COURSE SCHEDULE

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| **Orientation**— | Orientation<br>Review of Real Estate Markets and Appraisal Techniques |
| **Session 1**—Day 1 a.m. | Lecture 1. Review of Income Capitalization Concepts |
| **Session 2**—Day 1 p.m. | Lecture 2. Projecting Cash Flows |
| **Session 3**—Day 2 a.m. | Review and Correction of Homework<br>Lecture 3. Investment Analysis Concepts |
| **Session 4**—Day 2 p.m. | Lecture 4. DCF and Yield Capitalization Using an Overall Yield Rate ($Y_O$) |
| **Session 5**—Day 3 a.m. | Review and Correction of Homework<br>Lecture 5. Financial Leverage |
| **Session 6**—Day 3 p.m. | Lecture 6. Stabilizing Income and Equity Yield Capitalization Using an Equity Yield Rate ($Y_E$) |
| **Session 7**—Day 4 a.m. | Review and Correction of Homework<br>Lecture 7. Risk Analysis |
| **Session 8**—Day 4 p.m. | Lecture 8. Applications |
| **Session 9**—Day 5 a.m. | Review and Correction of Homework<br>Lecture 9. Supporting the Discount Rate |
| **Session 10**—Day 5 p.m. | Lecture 10. Course Review |
| **Examination**—Day 6 a.m. | |

# HOMEWORK ASSIGNMENT SCHEDULE

The identification of the nights is for national and other offerings in which the course begins on Sunday evening with the Orientation. Appropriate adjustments should be made for different presentation formats. The instructor will indicate any changes in homework assignments.

## Homework to prepare for Sessions 1 and 2

### Required reading

Lecture 1. Review of Income Capitalization Concepts, pp. 1-1 to 1-44
*The Appraisal of Real Estate*, 13th Edition, Chapter 20, P. 445-451, 465-467; Chapter 22, P. 499-517; Chapter 23, P. 519-524

Lecture 2. Projecting Cash Flows, pp. 2-1 to 2-29
*The Appraisal of Real Estate*, 13th Edition, Chapter 20, P. 447, 450-458, 463-465; Chapter 21, 474-492; Chapter 23, 526-528

## Evening of Day 1—Homework to prepare for Sessions 3 and 4

### Required reading

Lecture 3. Investment Analysis Concepts, pp. 3-1 to 3-43
*The Appraisal of Real Estate*, 13th Edition, Chapter 5, P. 108-109; Chapter 8, P. 149; Chapter 20, P. 447, 450, 456-458; Chapter 22, P. 499-517, 505-507; Chapter 24, P. 544-550; Appendix B, P. 671-684

Lecture 4. DCF and Yield Capitalization Using an Overall Yield Rate ($Y_O$), pp. 4-1 to 4-44
*The Appraisal of Real Estate*, 13th Edition, Chapter 20, P. 462-463, 466-467; Chapter 23, P. 520-526, 528-538

### Required writing

Practice Problems 1–34, pp. 1-45 to 1-50, 2-30 to 2-35.

## Evening of Day 2—Homework to prepare for Sessions 5 and 6

### Required reading

Lecture 5. Financial Leverage, pp. 5-1 to 5-24
*The Appraisal of Real Estate*, 13th Edition, Chapter 5, P. 85-109; Chapter 8, P. 149; Chapter 20, P. 461-465; Chapter 22, P. 499-507

Lecture 6. Stabilizing Income and Equity Yield Capitalization Using an Equity Yield Rate ($Y_E$), pp. 6-1 to 6-30
*The Appraisal of Real Estate*, 13th Edition, Chapter 24, P. 539-541; Appendix B, P. 668-674, and Jeffrey D. Fisher's "Using Circular Reference in Spreadsheets to Estimate Value" (See Appendix A)

### Required writing

Practice Problems 35–57, pp. 3-44 to 3-50, 4-43 to 4-47

## Evening of Day 3—Homework to prepare for Sessions 7 and 8

### Required reading

Lecture 7. Risk Analysis, pp. 7-1 to 7-35
*The Appraisal of Real Estate*, 13th Edition, Chapter 8, P. 157; Chapter 20, P. 445-450, 456-465; Chapter 24, P. 544-550

Lecture 8. Applications, pp. 8-1 to 8-43
*The Appraisal of Real Estate*, 13th Edition, Chapter 5, P. 89-94, 107-109; Chapter 12, P. 277-296; Chapter 20, P. 447, 450-467; Chapter 21, P. 474-494; Chapter 24, P. 539-550; Appendix B, P. 668-686

### Required writing

Practice Problems 58–73, pp. 5-25 to 5-27, 6-31 to 6-33

## Evening of Day 4—Homework to prepare for Session 9

### Required reading

Lecture 9. Supporting the Discount Rate, pp. 9-1 to 9-24
*The Appraisal of Real Estate*, 13th Edition, Chapter 4, 58-64; Chapter 5, P. 94-97; Chapter 20, P. 460-463; Chapter 22, P. 501-504; Appendix B, P. 679-681, 686
*The Dictionary of Real Estate Appraisal*, 4th ed.[1]

### Required writing

Practice Problems 74–95, pp. 7-36 to 7-42, 8-44 to 8-50

1. Subsequent references to *The Dictionary of Real Estate Appraisal* refer to the 4th edition.

# SUMMARY OF NUMERICAL ANSWERS TO PRACTICE PROBLEMS

## Session 1

| | |
|---|---|
| 9 | 0.0930 or 9.30% |
| 10 | $R_M$ = 0.1053; $R_O$ = 0.0977 |
| 11a | $666,667 |
| 11b | 14.30% |
| 11c | 10.71% |
| 12 | $651,163 |
| 13 | 10.21% |
| 14 | $830,129 |
| 15 | 0.1387 or 13.87% |
| 16 | 1,633,333 |
| 17 | $1,138,462 |
| 18a | 0.0938 or 9.38% |
| 18b | 0.0750 or 7.50% |
| 19a | $736,842 |
| 19b | $184,210.50 |

## Session 2

| | |
|---|---|
| 25a | $5,000 |
| 25b | $250 |
| 26 | $1 per sq. ft. |
| 27 | $15.61 |
| 28 | $1,226,756 |
| 29 | $1,656,121 |
| 30a | $97,000 |
| 30b | $76,167 |
| 30c | $36,167 |
| 30d | 0.53 |
| 30e | 0.41 |
| 31 | $886.98 |
| 32 | Year 1 = $74,008; Year 2 = $85,675 |
| 33 | Year 1 = $30,000; Year 2 = $31,500; Year 3 = $33,075; Year 4 = $34,729 |

## Session 3

35a *IRR* = 13.38%
35b +$135,525
35d 15.95%
37 $8,960
38 $1,679,105
39a 11.67%
39b 15.66%
39c 9.19%

## Session 4

51a $3,094,983
51b $2,365,255
52 $1,429,000 (Rounded)
53 $1,750,000
54 $1,511,101
55 $2,380,587
56 $1,432,379
57 0.1330 or 13.30%

## Session 5

59 at 25%: 0.1267
at 50%: 0.1300
at 75%: 0.1400
at 90%: 0.1700
60 at 25%: 0.0930
at 50%: 0.0800
at 75%: 0.0400
at 90%: –0.0800
62 $Y_{ET}$ = 10.90%
$Y_{MT}$ = 8.60%
65a 0.1895, or 18.95%
65b 0.0398 or 3.98%

## Session 6

66 $527,382
67 $762,952
69 $2,125,000
70a $2,566,927
70b 0.0974 or 9.74%
71a $5,599,104
71b $5,905,730

## Session 7

74a $R_E$ = (0.0150) or –1.50%
74b $R_E$ = 0.0800 or 8.00%
74c $R_E$ = 0.0500 or 5.00%
75 0.1640 or 16.40%
76a 8.35 units, or 83.5% occupancy
76b 83.5%
78a $271,671
78b *PV* at 14.35% = $16,823
78c $409,175
78d $102,294
83a Pessimistic: 7.93%
Most likely: 10.00%
Optimistic: 12.12%
83b 10.02%
83c Variance: 0.000263
Standard deviation: 1.62%
84a Expected *IRR* = 10.14%
Standard deviation: 5.52%

## Session 8

| | |
|---|---|
| 85a | $2,036,577 |
| 85b | $1,906,975 |
| 85c | $129,601 |
| 86 | ($29,955) |
| 87a | $V_O$ = $740,152 |
| | $V_{LF}$ = $601,356 |
| | $V_{LH}$ = $138,796 |
| 87b | $V_O$ = $740,152 |
| | $V_{LF}$ = $764,721 |
| | $V_{LH}$ = ($24,569) |
| 89 | $4,357,759 |
| 91a | $238,392 |
| 91b | 16.00% |
| 93b | Property: $7,736,998 |
| | Nonrealty: $901,244 |
| 94 | $9,308,873 |