



UNC
COLLEGE OF
ARTS & SCIENCES

THE UNIVERSITY
of NORTH CAROLINA
at CHAPEL HILL

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PLAN 575

Real Estate Development
Maymester 2016
Wednesday May 11 – Friday May 27
11:30 a.m.- 2:45 p.m.
New East 301

Instructor

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Course Description

Rigorous examination of real estate development from the entrepreneurial and public perspectives. Emphasis on risk management and the inherent uncertainties of development. The four dimensions of real estate are addressed: legal/institutional, physical, financial and economic/market. No prerequisites.

The course meets the undergraduate experiential education (EE) requirement.

Method of Instruction

The instructor combines lectures, reading assignments and case studies with field trips, interviews with real estate professionals and independent field work to master important concepts. Students with different knowledge and experience are teamed to improve learning outcomes.

Honor Code

The UNC Honor Code states: "It shall be the responsibility of every student at The University of North Carolina at Chapel Hill to obey and to support the enforcement of the honor code, which prohibits lying, cheating, or stealing when these actions involve academic processes or University, student or academic personnel acting in an official capacity."

Rationale for Experiential Education

Real estate development is not a field of deep scholarship. Most academic work focuses on real estate investment and finance. Development creates physical assets that have economic value and long lives. Development changes the built environment in profound ways that impact everyone.

The four dimensions of real estate development will be addressed with experiential education (EE). The field work and field trips are primarily designed to expose students to the built environment, recent projects and the participants of the development process. Concepts discussed in class will be applied to real world development situations.

Grading

Assignment #1 CD/MD analysis	15%
Assignment #2 DCF analysis	15%
Field Work A	10%
Field Work B	10%
Field Trips	10%
Final Examination	40%

Text

Godschalk, David R. & Emil E. Malizia, *Sustainable Development Projects*. Chicago: APA Press, 2013 available at Student Stores.

Lecture notes and assigned readings will be provided as handouts or distributed via email. Sakai will not be used.

Reading Assignments

You should set aside time each day to complete readings to avoid having to catch up at the end of the term. With 11 class days and two weekends, you have 15 days to complete all readings.

Graaskamp chapter pp. 228-243 & Summary (pdf)

Text Skim Preface & Ch. 1; Read Ch. 2 & connect to Graaskamp reading

Text, Ch. 3-4 use to complete Assignment #1

Text, Ch. 5

Text, Ch. 6 use to complete Assignment #2

Text, Ch. 7

Market analysis, proposed apartments, Level C (pdf)

Review all readings

You are also expected to re-read handouts and other materials provided in class

**Course
Calendar**

Topics

05/11

Introductions: interests related to real estate development; relevant background, experience or knowledge

Detailed syllabus review: discuss content, assignments, field work, field trips & coordination of all aspects of the course

Time commitments & expectations

Reading assignments & references

Review of content of the text

Note all due dates

Team Formation: student teams for field work: identification of development team members & projects (ULI case studies) and for field trips within the Triangle area

Field work A-interview Individual assignment

Field work B-project review Two or three-person teams

Field trips (2) Four-person teams

Strategies for completing field trips and field work

05/12

The real estate development process: detailed discussion of content, milestones, basic concepts & terminology

Participants in development: roles, development team & decision criteria
Integrating development, design & regulation

Risk management: detailed review of Graaskamp reading

Economic dimension: Land use economics, urban spatial structure, site selection & site control

Application: Vibrant places/centers, review of vibrant centers research

05/13

Field trip and field work

05/16

Physical dimension: Small-area plans (ULI boards), site plans & urban design

Application: improving measures of vibrancy

Financial analysis: Back-of-the-envelope, static financial analysis & dynamic financial analysis

Cost-driven/Market-driven analysis

Real estate lending: underwriting criteria

05/17

Financial analysis: Review of Assignment #1; review of apartment design alternatives in Text

Revenue-expense analysis – project timeline & cash flows for solvency

Physical dimension: construction types, management of construction, construction contracts, capital budgeting, challenges in construction

05/18 Financial analysis: DCF basic concepts & structure, review of Ch. 6 example
Financial plan & Ownership structures

Economic dimension: Real estate market analysis
Level C analysis of apartment project

05/19 Financial analysis: Review assignment #2 – DCF analysis of BTIRR

Economic dimension: Commercial leases

05/20 Developemnt Case Studies: Bolin Center, Workforce Housing, ULI files

05/23 Legal dimension: Roles of government – 1) Regulation
Long-range planning, zoning, CIP, project review
2) Infrastructure provision & financing
3) Development facilitation – PPPs

05/24 Field work presentations
Real estate appraisal

05/25 De-briefings of field trips
Course review

05/26 Reading day

05/27 Final exam

Field Work

A: Development team member interview

Select the development team member of interest: developer, general contractor, broker or leasing agent, construction and/or permanent lender, architect or other design professional, engineer, market analyst/appraiser, or attorney.

Identify the professional you plan to interview and schedule the interview.

Send the person's name and affiliation to the instructor by May 18

Conduct an in-person, skype or telephone interview.

Interview questions:

Current position –describe what you do

Career path – how did you come to do what you are now doing?

How did you become qualified to do this work? – combination of experience, apprenticeship and education

In the real estate course I am taking, we are emphasizing how developers and development team members manage risk during the development process.

Please describe the areas of risk that concern you most

Which strategies do you use to manage these risks?

What advice would you offer students who may want to pursue your vocation?

Write a paper on your interview (3-5 pages, 1.5 spacing). Turn in hard copy at the beginning of class on May 20.

Field Work

B: Development project review

Identify a large, important or complex commercial development project

Determine the development timeline:

What were the approximate dates from idea inception through stabilized occupancy?

How many months did it take for the developer to go from original idea to public approval?

How many months did construction take – from building permit to CO?

How long did it take from CO to achieve stabilized occupancy (or target sales)?

Describe the project

Property type or types if mixed/multi use

GBA by property type

Location – city & subarea: downtown redevelopment, suburban greenfield project

Cost – try to distinguish land/site costs, site development costs, hard construction costs & soft costs

Development team identification

Developer

General contractor

A&E firm

Significant features of the project

Is the project noteworthy?

Challenges

Describe one or more important problems tackled by the development team

Students are encouraged to find either 1) a recently completed project in the Triangle region, 2) an important project in their home town or familiar place, or 3) a project from the ULI case series.

Prepare an outline of the project with information collected on the the points above (2 pages or less).

Present your findings to the class on May 27.

N.B. If you gather much of your information about the development project from one of the participants, you should consider interviewing that person for the Field Work A assignment.

Field Trips

You are expected to take two field trips each lasting about 4-6 hours. You should go to downtown Durham for one; you may go the downtown Raleigh, Cameron Village or North Hills for the other. You can access background information on the Downtown Durham Inc. website and other relevant websites. I will provide some additional information in class.

The first field trip should be completed between May 13 and May 15. The second one should be completed by May 23. You can make one visit or visit on several occasions. You can travel solo but teams will be formed to encourage group visits.

During the trips, you are expected to 1) walk around in the area, 2) tour strategically important and innovative projects and sites, 3) talk with one or more pedestrians on the street, service workers or managers and 4) discuss your observations with your team mates. For 3) which are called intercept interviews, ask the person why they are there and what they like most and least about the place.

Two questions to keep in mind are the following: What makes this place vibrant/active/interesting? What is missing that could improve its vibrancy?

Teams will present de-briefs of both field trips on May 25.

Assignments

Assignment # 1: CD-MD analysis

See pp. 7-8 below. Use templates provided to do the assignment.

Turn in hard-copy write-up of your analysis at the beginning of class on May 17.

Assignment #2: DCF for apartment project described in Ch. 6

Come to class prepared to demonstrate your grasp of DCF analysis. Use the template provided to complete your analysis. Be prepared to discuss rent levels, vacancy rate, operating expenses, degree of leverage, loan terms (rate & amortization period), and going-out capitalization rate.

Discussion will occur on May 19.

Note: After-tax returns will not be subjected to sensitivity analysis.

Assignment #1: Static Financial Analysis: Cost-Driven & Market-Driven Analysis

Your task is to analyze a proposed office project in the Research Triangle area. The developer proposes the construction of either a three-story or four-story office building with 60,000 square feet (SF) of gross building area (GBA). The design of the project results in a building efficiency ratio of 85%. The most attractive site is off 15-501 in Durham near the I-40 interchange. The site is 4.309 acres and the asking price is \$542,000. This site is more than adequate for the building footprint, associated parking, and landscaping.

Preliminary construction numbers indicate a construction “hard cost” of \$120 per SF. Construction interest for the 15-month construction period, indirect costs for design, legal work and other “soft costs” are estimated to be 30% of hard costs.

The lender is offering permanent debt financing at a rate of 4.5% amortized over 20 years, with monthly payments and a 10 year term with a call provision at that time. The annualized monthly mortgage constant on such a loan is 0.0759179. The lender will apply a 75% loan to cost ratio (L/C) and use a debt coverage ratio (DCR) of 1.25 to underwrite the project.

The developer is seeking investors who are willing to provide the equity and want to earn 12% cash-on-cash return (12% on equity invested).

Analysis of comparable projects indicates that annual operating expenses will average \$2.50 per SF of space (GBA). Conversations with the local assessor’s office indicate that the rate for real estate taxes is \$1.20 per \$100 value. The appraiser will use the cost of the project as its initial assessed value.

The market for office space is improving, and demand for small buildings is growing. When lease up is completed (i.e., first year of stabilized operations), the project should have a vacancy rate of 15%. Rents are expected to stabilize at \$24.00 per SF of leasable space, paid on a gross basis (i.e., the owner pays operating expenses and real estate taxes).

Assignment #1: Analysis of the Project

Using the Cost driven and Market driven approaches, answer the following questions:

1. Construction cost estimate

How much will it cost to construct the proposed three-story building including land?

2. Income analysis

What is the expected (stabilized) net operating income given expected rents for this project?

3. Cost driven analysis with loan to cost ratio

What level of rents is necessary to support the capital costs of this project?

How does this rent level compare to current market rents?

4. Market driven analysis with debt coverage ratio

What are the justified mortgage amount and justified project investment using this approach?

If estimates of the cost to construct the building and associated soft costs are firm, how much can the developer pay for the land?

By how much would the land price have to be reduced in order to make the deal “work”?

5. Other analysis

Can you identify any important cost item that has been omitted?

How can you use the CD/MD analysis to estimate the amount of loan? What is that amount?