



UNC
COLLEGE OF
ARTS & SCIENCES

THE UNIVERSITY
of NORTH CAROLINA
at CHAPEL HILL

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PLAN 375

Real Estate Development
Maymester 2019
Wednesday May 15 – Friday May 31
9:00 a.m.- 12:15 p.m.
Phillips 301

Instructor

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Office hours: May 15-29 after class

Course Description

Thorough examination of real estate development from the entrepreneurial and public perspectives. Emphasis on risk management and the inherent uncertainties of property 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, case studies, and in-class discussions with field trips, interviews with real estate professionals, and independent field work to understand the development process. 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 (RED) is an area of practice, not a distinct academic discipline. Most scholarly work focuses on real estate investment and finance. RED creates physical assets with economic value that last for a long time and changes the built environment in profound ways that impacts everyone. Different aspects of RED will be addressed through experiential education (EE). The field work, field trips, and independent study are primarily designed to expose students to the built environment, recent projects, and the participants in the development process. Concepts discussed in class will be applied to real world development situations.

Grading

CD/MD analysis	10%
DCF analysis (see p. 7)	5%
Gov't financing tools memo (see p. 7)	5%
Field Trips: Team- In-class presentation	10%
Field Work: Team - In-class presentation	10%
Individual paper	15%
Attendance & in-class participation	10%
Final Examination	35%

Text

Godschalk, David R. & Emil E. Malizia, *Sustainable Development Projects*. Chicago: APA Press, 2013 available from the Instructor. Used copies may be available online.

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

Reading Assignments

You should set aside time each afternoon to complete the assigned readings. It will be difficult to catch up. The term is very short. You have only 15 days, counting Memorial Day, to complete all readings and assignments. The major reading assignments with due dates include:

- 05/16 Graaskamp chapter (pdf)
- 05/16 Text, Skim Preface & Ch. 1;
- 05/17 Text, Ch. 2, pp. 12-17
- 05/17 Text, Ch. 3-4 use to complete Assignment #1
- 05/20 Text, Ch. 5
- 05/20 Text, Ch. 6 use to complete Assignment #2
- 05/21 Text, Ch. 7
- 05/21 Text, Skim Ch. 8

You will also receive handouts, additional reading. and other materials to reinforce in-class discussions.

Calendar	Topics
	<p>Note: Classes will usually be divided into two sessions: Session A) 9:00 to 10:30 a.m. and Session B) 10:45 a.m. to 12:15 p.m.</p>
05/15	<p><u>Introductions:</u> Student interests in real estate development; relevant background, experience and knowledge</p> <p><u>Detailed syllabus review:</u> Discuss content, assignments, field work, field trips & coordination of all aspects of the course Time commitments & expectations Reading assignments & references Review content of the text Note due dates</p> <p><u>Team Formation:</u> Student teams to conduct field trips and field work Form teams Discussion of potential projects in NC Field work – Team assignment Field trips to Raleigh and Durham – Team assignment Strategies for completing field trips and field work Developer interviews – Individual assignment</p> <p><u>The real estate development process:</u> Detailed discussion of content, milestones, basic concepts & terminology <u>Participants in development:</u> Roles of consumer, producer & government Development team & decision criteria</p> <p><u>Risk management:</u> General techniques & specific tools</p>
05/16	<p>Review/discuss Graaskamp reading & Text assignment</p> <p><u>Economic dimension:</u> Urban economics (bid rent) & spatial structure (agglomeration economies & diseconomies), geographic vs economic location Site selection & site control</p> <p><u>Physical dimension:</u> Placemaking & urban design (video), urban land nexus (economic space, social space, circulation), features of density, diversity & connectivity <u>Application:</u> Vibrant places/centers, measures of vibrancy, review of research results</p>
05/17	<p>Review/discuss assigned readings in Text</p> <p><u>Financial analysis:</u> Back-of-the-envelope, static financial analysis & dynamic financial analysis Cost-driven/Market-driven analysis (Assignment #1)</p> <p>Real estate lending: underwriting criteria</p>

- 05/20 Financial analysis: Review of Assignment #1; review of apartment design alternatives in Text
 Revenue-expense analysis – project timeline & cash flows for solvency
 Review example in Text, Ch. 5
- Financial analysis: DCF basic concepts & structure, review of Ch. 6 example, workforce housing example (Assignment #2)
 Financial plan
 Ownership structures
- 05/21 Financial analysis: Review assignment #2 – DCF analysis
- Review assigned readings in Text
- Physical dimension: Construction types, managing the construction process
Physical/economic/legal dimensions: construction contracts, capital budgeting
 Construction challenges & tradeoffs
- 05/22 Construction –continue
 Environmental factors in RED: Phase I-III environmental analysis, LEED, green development
- Economic dimension: Commercial leases
- Legal dimension: Political economy discussion; government’s role in capitalist economies – historic & current
 Roles of government in RED – 1) Regulation
 Long-range planning, zoning, CIP, project review
 2) Infrastructure provision & financing tools – Assignment #3
 3) Development facilitation – PPPs
- 05/23 Legal dimension: Community relations
 Discussion question: Why do so many people hate real estate development?
 Flipped classroom format
- Bolin Center Case Study
- 05/24 Economic dimension: Real estate market analysis
 Real estate appraisal
 CoStar demonstration
- 05/27 Memorial Day – No class (distribute exam review questions)
 Assignment #3 due
- 05/28 Field work team presentations – 45 min. each
- 05/29 Durham field trip presentations – 20 min. each
 Discussion of final exam

05/30 Reading day

05/31 Final exam

Field Work – Team Assignment

Development project review

Identify a commercial development project (\$5 mill. or more) completed within the past 3 years in North Carolina.

Select a project that your team can visit at least once. Gather as much information as you can from the project's website and on line. Try to find public opinion about the project.

1. 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 securing the site to receiving public approvals?
 - 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)?
2. Describe the project
 - Property type or types if mixed/multi use
 - GBA by property type
 - Location – city & subarea: downtown redevelopment, suburban greenfield
 - Cost – try to distinguish land/site costs, site development costs, hard construction costs & soft costs
3. Development team identification
 - Developer(s)
 - General contractor
 - A&E firm –architect & engineers
 - Attorney
 - Commercial banker financing construction
4. Significant features of the project
 - Is the project noteworthy in some way?
5. Challenges
 - Describe one or more important problems tackled by the development team

Prepare a powerpoint on the project to be presented to the class on May 28 along with discussion questions.

Send the powerpoint to the instructor by May 31.

Your team should use the five major points and detailed items shown above as the template for the presentation. 35 min. presentation + 10 min. discussion

Individual Assignment

Development team member interview

Conduct an in-person, skype or telephone interview.

The most valuable interview would be with an active developer. Many development companies pursuing commercial projects that have more than one partner fulfilling the

developer role. With the instructor's permission, you may interview a general contractor, construction lender, or architect actively involved in commercial development.

Identify the professional you plan to interview and schedule the interview. Send the person's name and affiliation to the instructor by May 24.

Interview questions:

1. Current position –describe what you do
2. Career path – how did you come to do what you are now doing?
3. How did you become qualified to do this work? – combination of experience, apprenticeship and education
4. 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 concerned you most
Which strategies did you generally use to manage/mitigate risks?
5. Do you have any advice to offer to students who may want to pursue your vocation?

Write a paper based on your interview (about 3 pages, 1.5 spacing). Please use the questions listed above as the format for the paper. If you do not get an answer to a question, please list that question in the paper as unanswered. Turn in hard copy by 4:00 p.m. on May 30.

Field Trips – Team Assignment

You are expected to take two field trips each lasting about 4-6 hours. For the first one, go to Raleigh, either downtown, Cameron Village, or North Hills. First read background information on websites: Downtown Raleigh Alliance, Cameron Village, North Hills- Kane Realty.

You have two weekends, Memorial Day and evenings during the week to make these trips. You can make one visit or visit on several occasions. You can travel solo but going with team members has proven to be more productive.

During the Raleigh field trip(s), you are expected to 1) walk the area, 2) identify the gathering places or destinations that seem important, 3) observe the modes of transportation (walking, auto, bus, etc.), 4) talk with at least two persons who are either visitors (pedestrians on the street), employees working at one of the establishments in the center, or others including shop owners, cops in the area, taxi drivers, etc. (These talks are formally called intercept interviews.) Ask the person to tell you about the place, identify what they like most and least about it, and if they have suggestions for improvement.

When you visit downtown Durham you can either focus on the American Tobacco District (ATD) or City Center District (CCD). You can also visit the Central Park District for comparative purposes.

Your goal is to learn more about vibrant centers (refer to readings and class notes). Try to talk to 4-5 people. Ascertain whether they are downtown workers, residents or visitors. Here are illustrative questions you could ask:

When are you typically here?

Where do you spend most of your time?

Are there events that bring you here? If so, which ones.

Do you use any other modes of transportation besides walking to get around?
What do you like most about this area? What's missing?

You should take pictures of places or features you think add vibrancy to ATD or CCD.

The general questions to keep in mind are:

What makes this place vibrant/active/interesting?

Which specific locations appear to be most important?

What seems to be missing that could increase its vibrancy?

Teams will prepare a 15-20 min. presentation summarizing the Durham field trip to be presented on May 29. You should focus on features of the built environment and all modes of circulation (walking, cycling, driving, transit) either in the ATD or the CCD.

Assignments

Assignment # 1: CD-MD analysis

See pp. 8-9 below. Templates will be provided to help you complete the assignment.

Turn in hard-copy write-up of your analysis at the beginning of class on May 20.

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

Using the template provided for this project, conduct a sensitivity analysis that assumes a 5% reduction in rent. First, record the negative impact of lower rent on NOI, NPV and BTIRR.

Second, change 3-4 other assumptions enough to compensate for the rent reduction. For example, you could lower the vacancy rate or operating expenses. You could increase growth assumptions or degree of leverage. You could modify loan terms (rate & amortization period) or the going-out capitalization rate. Record the value of each factor you select that compensates for the 5% rent reduction such that NOI, NPV and BTIRR are restored to their original values. Do any of the compensatory changes seem realistic?

Come to class on May 21 prepared to present your work.

Assignment # 3: Public financing tool: conduct research on the tool you are assigned & write a one-page memorandum 1.5 spacing. Send your paper to the instructor as an email attachment. Your paper will be sent to the class. Due May 27.

Static Financial Analysis: Cost-Driven & Market-Driven Analysis

Emil Malizia, PhD, FAICP

Exercise

Your task is to analyze a proposed office project in the Research Triangle area. The developer proposes the construction of a four-story office building with 80,000 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 3.0 acres and the asking price is \$750,000. This site is more than adequate for the building footprint, associated parking, and landscaping.

Preliminary construction numbers indicate a construction “hard cost” of \$160 per SF. Construction interest for the 18-month construction period, indirect costs for design, legal work and other “soft costs” are estimated to be 25% of hard costs. Site development costs are estimated at \$3 per sf for the site.

The lender is offering debt financing at a rate of 4.5% amortized over 20 years, with monthly payments and a 10 year term (call provision). 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 10%. Rents are expected to stabilize at \$28.00 per SF of leasable space, paid on a gross basis (i.e., the owner pays operating expenses and real estate taxes).

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 four-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. Calculate the monthly mortgage constant to be sure that the one given in the example is correct.
6. How can you use the CD/MD analysis to estimate the amount of loan? What is that amount?