

Course Syllabus

[Jump to Today](#)

Schedule:

Thursday, 9 am - 12:00 pm

113 Avery

Instructors:

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1. **Course Description**

The capstone course synthesizes the learnt analytical, comparative and critical processes involved in real estate development projects, transactions and investments. It provides an opportunity for the student to demonstrate his/her understanding of the dynamics of real estate development, its capital requirements, and delivery procedures.

With the utilization of various real estate development and investment case studies and the input by external industry professionals, this course presents a broad array of property types, urban and economic contexts, critical decision-making and business styles. With the intensity of in-class examination of each case, the student will be required to advance his/her decision-making and management skills to respond to the rapid resolution of real estate issues and challenges. With reference to actual development sites and real-time analysis, students will proceed through the assessment of the physical aspects, financial returns, and transaction processes of a deal and propose improvements to the outcome.

With reference to professional practice, the format for addressing the case studies has three stages progressing from full class discussion, though team-based debate, to the individual presentation:

1. **All-class** discussion and debate of each of four selected case studies resulting in identification of development issues, capital structures, or decisions which could be improved.
2. **Team-based**, detailed investigation of each case (every student focuses on one of the four cases studies), resulting in the classroom negotiation between conflicting parties with the objective of improving the outcome, as evaluated by the non-participating class members.
3. **Individual** exploration for an alternative resolution of the case study examined in stage two, taking into account the negotiation dynamics of that phase, and producing a comprehensive, detailed, and compelling proposal for an improved outcome. Creative but credible efforts are encouraged, with the deliverable being a hard copy “Deal Book” for potential capital partners.

In addition, the final Capstone Project of each student will be presented in a 10 minute “pitch” to the class with guest instructors and external professionals. The five best pitches will be selected to participate in a subsequent “Shark Tank” format with a committee of notable professionals and faculty.

1. Course Requirements and Assignments

Students will be expected to attend all classes, which will comprise lectures, guest presentations, classroom discussions and team negotiations. Participation in all class discussions, are required as these will factor into the final grade.

Four case studies will be addressed throughout the course and utilized as follows:

- Each of the four cases will be examined in class. Students will prepare for the discussion and participation will be noted towards the final course grade.
- In teams of 6-10 people, students will elect one of the four case studies to examine in detail with a view to critically evaluating the investment, its returns and risks.
- **Individually**, as the Capstone Project, each student is to propose an alternative outcome for the case study taken under evaluation, and make a new proposal in the form of a Deal Book.

This Capstone Project is the key deliverable for the student’s presentation of his/her comprehensive understanding of the material studied in the MSRED program, and provides a tangible demonstration of professional capability and excellence.

Case Study and Capstone Project Content:

Discussions of the specific cases and the proposed Capstone Project should include the following:

- Development concept. Design, and functional program
- Zoning and entitlement approvals, hurdles, and/or strategies
- Market Analysis and input data for financial analysis
- Financial analysis and capital structure
- Project delivery schedule and management strategy
- Marketing and/or exit strategy

Case Study/Studio Method:

- **All-class Case Analysis:** The four case studies will be subjected to class discussion in four successive weeks. The student is required to read the case, compose a succinct description of the status of the real estate project and the critical challenges or concerns, and be prepared to discuss the details in class. The instructor will call upon any student to commence the discussion.
- **Team Debates:** Subsequent to the all-class discussions, each student will select one of the cases and form teams of 6-10 persons,. (Therefore there will be between 3 and 7 teams reviewing each case.) Teams will prepare to present their review of case in the classroom setting and then debate the other teams on that respective case. The use of visual aids in these team presentations is recommended.

Case Study Moderators:

The all-class analysis and team debates will be moderated by the instructors. Additional external reviewers may be included as relevant to certain aspects of the cases.

Case Study Team Dynamics

Each case study team will elect a Project Manager (PM) on day one of each detailed team-based case analysis. That PM will be responsible for overall production and act as a facilitator for the group. The PM will lead four Sub-teams:

- Development Concept and Delivery Process (1-3 people) - This group creates initial trial project programs and works to finalize the development concept through consensus with other Sub-teams, arbitrating design, finance analysis, and capital sources. This group will also be responsible for deriving cost numbers and a development schedule. The PM should be a part of this group.
- Site Layout, Design and Functional Program (1-2 people) - this Sub-team will develop the site plan and layout in response to planning constraints and produce the architectural and design images necessary to provide a clear idea of the project and sufficient details for financial analysis and project management.
- Market Analysis, Property Comparables, and Marketing Strategy (1-2 people) - This group will perform market research and help drive the program and concept to fit the market requirements. The market study should substantiate the functional program and design concept in addition to providing reliable inputs for the financial analysis. Also, this group is to propose a marketing strategy for the sale/lease-up of the project.
- Financial Analysis (2 people) - This group will prepare the feasibility analysis, the DCF Proforma, and metrics and to support or modify the functional program and design concept to maximize the project returns.
- Capital Structure and Project Risks (2 people) – This group will examine the current capital markets and propose a credible capital structure for the project. Additionally, the potential risks to the feasibility of the project are to identified, financially evaluated in a sensitivity analysis, and mitigation strategies proposed.

Team Meetings will take place outside the classroom to prepare for the scheduled in-class presentation and debate with other teams.

IMPORTANT -- Team Dynamics + Flexibility + Circular Nature of Case Study Activities

Everything is based upon the vision and formulation of the development program and buildable square footage. This must be done immediately with input from the entire team. Vigorous and quick consensus building will be required by the team Project Manager. Without establishing a starting point for the overall vision and a breakdown of square footage by use, none of the other processes can reasonably go forward. Once the vision and site plan are established and the other processes are up and running the project proposal becomes an interactive discussion wherein the Financial Pro Forma + Market Support influences the Product Concept and Site Plan / Design Layout iteratively. This requires that all analyses be set up for quick changes/adjustments and to work efficiently for sensitivity analyses.

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Capstone Project Details:

Individually, each student will be required to:

- Make a comprehensive, detailed, and compelling proposal for a **real estate equity investment**.
- The proposal is to be an alternative proposition for one of the case studies reviewed in the class. Each student is to create his/her own proposal and that proposal may be for an alternative in the property development, the investment structure, and/or the capital stack. Creative but credible solutions are encouraged.
- This proposal will be prepared in three steps and submitted as scheduled:
 - **Proposal Memo 1 (10% of course grade):** Give a general description of the alternative proposal. Provide an evaluation of the detailed aspects of the given case study that are to be improved in the new proposal. Present all new data and assessments necessary to support the new proposal, such as market analysis, site reviews, functional evaluations, capital markets conditions, and investor sentiment.
 - **Proposal Memo 2 (15%):** Provide the comprehensive revised financial analysis of the investment proposition. The full DCF Proforma for the holding period is to be provided in detail including the specifics of the capital stack and returns to all investment participants. A summary in prose, with simple charts as necessary, is to be provided that is specifically directed to the equity investor – this is the financial core of the “pitch”.
 - **FINAL SUBMISSION: DEAL BOOK:** Complete presentation of the alternative Real Estate Investment Proposal comprising:
 1. Written submission (25%) that comprehensively makes the case for the investment, i.e. includes a summary which “sells” the proposal, and consolidated supporting material.
 2. Oral presentation (10% additional grading) in class for 10 minutes, that makes the “pitch” for investing in the project

The three components: Proposal Memo 1, and 2, and the Final Submission DEAL BOOK, in addition to the 1-page summary and visual aids for presentations must be posted to Canvas on schedule.

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DEAL BOOK Content:

- **Executive Summary – 1 Page Maximum**

- **Development Concept, Design and Functional Program**
 - This should be the physical foundation for everything that follows
 - Explain the vision for the project
 - Include a functional program, and the building layout, including square footages for each proposed use
 - **Architectural Synopsis**
 - Site plan
 - Ground floor plan and at least one typical upper floor plan
 - Elevations and/or renderings are encouraged (these can be included in the appendices)
 - The square footage and how it works on site should clearly be laid out, including the linkages between the development and its surroundings, the relationships between various aspects of the development, and a general visual takeoff on the initial concept
 - Most important is that the design should support the feasibility of the vision

- **Zoning and entitlement approvals, hurdles, and/or strategies**
 - Zoning analysis
 - Massing diagram (bulk study)
 - Description of how the massing configuration respond to zoning limitations
 - Identification of remaining entitlement issues or applications for variances (with justification)

- **Market Analysis and input data for financial analysis**
 - Summarize the relevant market analysis
 - Derive the implications for the project and support for the concept
 - Provide additional detailed materials as necessary in the appendix
 - Provide the market data that informs and substantiates the assumptions made for pricing, revenues, absorption, and expenses for the financial analysis of the project
 - DO NOT REGURGITATE FACTS ABOUT THE MARKET, SUCH AS CENSUS DATA AND DEMOGRAPHICS

- **Financial Analysis and Capital Structure**
 - Acquisition price that your concept can support
 - Total Cost of development (or redevelopment)
 - Financial feasibility of the development proposal
 - ATCF and IRR (both unlevered and levered) for appropriate Holding Period
 - Cash on Cash returns
 - Net profit and Return on Cost

- Equity multiple
 - Capital Structure: debt and equity strategies
 - Sources and Uses of Funds
 - Sensitivity Analysis
 - A clear “ask” of \$X of debt and \$Y of equity.
- **Project delivery schedule and management strategy**
 - A project schedule or Gantt chart
 - Project management procedure for ensuring timely and within budget delivery.
- **Marketing and/or exit strategy**
 - Marketing Plan that includes appropriate strategy for sales or lease-up.
 - Marketing Budget
 - Details of planned exit from the investment including timing, exit pricing and potential purchasers.
 - Multiple Exit Strategies
 - In addition to the planned exit strategy provide a fall-back analysis (Plan B) in case the concept or a portion of it fails.
- **Project Risks and Mitigation**
 - Identify the most probable risks
 - Provide credible and sufficiently details strategies to mitigate those risks.
 - Summarize risk scenarios
- **Appendices:**
 - Market support materials
 - Additional renderings or plans
 - Details of Financial Analysis

Capstone Submission Components:

- Five hardcopies of a **one-page summary** due at time of presentation
- Electronic copies of all materials to be submitted to Canvas prior to presentation including:
 - PDF of Deal Book
 - Active Excel file of proforma (formatted in a way that is easy to read and understand)
 - PowerPoint slides utilized in presentation

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Canvas:

Columbia University's online Canvas system will be used for posting the course syllabus, selected class materials/handouts, hyperlinks to locations from where case studies and additional reading materials to be used in the course could be found and/or purchased by students. Canvas will also be utilized for the posting by students of all Case Study and Capstone submissions. Canvas will also be utilized as a tool for the instructor and Teaching Assistants to post announcements, and also for the instructor and students to connect outside of the classroom more consistently and conveniently.

III. COURSE GRADING CRITERIA

Course grading criteria are as follows:

- Attendance and in-class case study participation: 20%
- Detailed case study review as a team 20%
- Capstone Project (in three submissions): 50%
- Presentation or "pitch" of the Deal 10%

Team Grading: In addition to the case study grade conferred by the instructors for the team-based activities, each Sub-team will receive a grade on that particular Sub-team's performance, and the members of each Sub-team will also grade each other. Each team member's grades will be comprised of three scores: one for the overall group project, one for his/her Sub-team's performance and one from his/her fellow Sub-team members and PM.

Each of the Team Members in each of the four Sub-teams shall grade his/her fellow Sub-team team members in order to establish a range of individual team member contributions. Each member shall receive an HP, P or LP.

Example of net effect of Team grading - If Alistair is in the Finance Sub-team in Group #1 and Group #1 receives a P on their overall Project but Alistair's Finance Group receives a HP and his SubTeam gives him a HP then he would receive a HP even though Group #1 received a P.

All student-of-student grading will be anonymous.

Only exceptional performers in **all** of the grading criteria will receive a High Pass.

1. READINGS

Students will be expected to complete readings in advance of class. The case studies for class discussion will be posted one week in advance on Canvas.

Additional references for the course will be provided on Canvas.

There is no required textbook for the course.

Other Notes

DO NOT CONTACT THE CASE STUDY SPONSORS UNDER ANY CIRCUMSTANCES UNLESS THEY SPECIFICALLY REQUEST IT.