



The Boston University Certificates in

REAL ESTATE

Commercial Real Estate, Facilities Management, and Real Estate Finance

The Boston University Program for Real Estate Studies can provide the environment, courses, instructors, and network of like-minded professionals to help you improve your performance and success. The Certificates in Commercial Real Estate, Commercial Real Estate Practice (online), Facilities Management, and Real Estate Finance offer a framework and platform upon which to build your professional expertise. Our affiliation with the Real Estate Finance Association (REFA) and the Greater Boston Real Estate Board (GBREB) assures you that our courses and programs are relevant to the needs of today's market. Our working faculty provides real-world experience and practical application in a challenging academic setting that will immediately improve your personal and organizational effectiveness. Learn lessons today that you will be able to put to use on the job tomorrow.

CERTIFICATE IN COMMERCIAL REAL ESTATE

The Certificate in Commercial Real Estate is designed to provide the important skills necessary to analyze, assess, finance, acquire, construct, and operate real estate assets. The certificate is awarded upon successful completion of eight courses, including the following six-course core curriculum:

Required Courses

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| RE 104 Commercial Lease Analysis | RE 108 Advanced Real Estate Investment Analysis: Case Studies |
| RE 106 Overview of the Real Estate Development Process | RE 112 Fundamentals of Real Estate Finance Analysis |
| RE 107 Fundamentals of Investment Analysis | RE 203 Managing Commercial Properties |

Two other elective courses of the student's choice complete the certificate requirements.

REAL ESTATE FINANCE ASSOCIATION CERTIFICATE IN REAL ESTATE FINANCE

The Certificate in Real Estate Finance is a designation offered in collaboration with the Real Estate Finance Association (REFA), a division of the Greater Boston Real Estate Board (GBREB), which approves the instructors and course materials. The REFA Certificate program provides practical courses in mortgage and equity finance and the balanced education necessary for career advancement. The certificate is awarded upon successful completion of eight courses, including the following six-course core curriculum:

Required Courses

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| RE 107 Fundamentals of Investment Analysis | RE 116 Underwriting the Commercial Mortgage |
| RE 112 Fundamentals of Real Estate Finance Analysis | RE 123 Physical Evaluation of Real Estate Assets |
| RE 113 Fundamentals of Market Analysis | RE 125 Practical Legal Knowledge Essential for the Professional |

Two other elective courses of the student's choice complete the certificate requirements.

Certificate in Facilities Management

Facility management professionals are called upon to deliver a wide range of professional services to control property costs and make their organization productive. Boston University's Certificate in Facilities Management explores the core disciplines necessary to develop and execute the corporate facilities mission and provides a platform for career success.

Students can customize their course selection to meet their personal and professional goals. Students may take up to two course electives listed in the Commercial Real Estate curriculum. Certificates are awarded in Facilities Management upon successful completion of eight courses.

- FM 101** Fundamentals of Facility Management Systems and Practices
- FM 102** Facility Planning and Design Management
- FM 103** Facility Construction and Project Management
- FM 104** Facility Operations and Maintenance Management
- FM 105** Facility Financial Management
- FM 106** Environmental Health and Safety for Facility Managers
- FM 107** Building Systems
- FM 108** Security Management for the Facility Manager
- FM 109** Leadership and Executive Presence

RE 106 | Josh Anderson, principal of Cedarbend Consulting, is a member of the Urban Land Institute and has achieved the MAI designation from the Appraisal Institute.

RE 116 | Alan Brand, partner and asset manager at TA Associates Realty, a Boston-based pension fund advisor which manages over \$11.5 billion in commercial real estate assets for institutional and pension funds.

FM 107 | Blair Chamberlain, PE Group director of the Plumbing and Fire Protection Engineering Department at WSP Flack + Kurtz.

RE 112 | Amy Coghlin, former vice president of acquisitions at Boston Capital Corporation, specializes in multifamily affordable housing. During her more than twelve years with Boston Capital, she closed more than \$500 million in tax credit equity and was responsible for the origination, analysis, and acquisition of investments across the country.

FM 104 | Denis Cysan, operations manager at Cushman & Wakefield, has a proven track record of working to both reduce operating costs through strategic planning and sustainable projects and delivering better service through ongoing process improvements.

RE 140 | Martha Faigen, senior partner at Riemer & Braunstein, representing lenders in commercial real estate mortgage, acquisition and refinancing, and construction loan transactions.

FM 108 | Mark Foster, manager of security and safety at Tufts Health Plan, has extensive expertise in investigations, security system design and installation, and management of both proprietary and contract security staff.

RE 123 | Michael Gill, CLEED, AP, O&M, is the director of operations for the Federal Reserve Bank of Boston. He is a past president of BOMA and has completed the Greater Boston Leadership Program with MIT Sloan Management Executive Education.

FM 101, 102 | John J. Gioioso, FM, MCR, has been in the facilities management field for over 38 years, managing properties for such companies as Fresenius Medical Care North America, Baybank, and Shawmut Bank. John is closely affiliated with IFMA and was awarded a Master of Corporate Real Estate designation from CoreNet Global.

RE 107 | Jonathan Keefe, program director for the Real Estate Studies Program at Boston University; managing director of strategic consulting at Cushman & Wakefield in Boston. A member of the board of directors of the CoreNet Global New England chapter and a LEED™ AP and licensed real estate broker, Keefe has overseen transactions throughout the United States, Europe, and Asia.

RE 123 | Dean Larson, associate director of facilities at the Broad Institute, oversees security, maintenance, and engineering operations.

RE 175 | James Martin, director at Duff & Phelps, has extensive experience in due diligence, financial modeling and valuation.

FM 104 | Gretchen McGill, vice president of construction at The Davis Companies, has over twenty-five years of experience working for such firms as Trammell Crow Company, Boston Properties, and MIT Lincoln Laboratory. McGill has been involved in every facet of development and construction management from multiple perspectives, including owner, developer, end user, affordable housing, general contractor, and consultant. She is a member of the board for the Groundswell Redevelopment Project, a disaster and humanitarian relief organization.

RE 203 | Christopher Mellen, vice president of the Simon Companies, is past president and on the faculty of the Institute of Real Estate Management.

RE 104 | Robert Nahigian, FRICS, SIOR, CRE, MCR, has thirty-nine years of multi-disciplinary levels of real estate experience. He has handled approximately \$5.1 billion of real estate totaling 41 million square feet of office, retail, and industrial projects throughout the US. Nahigian is recognized as an industry's most prolific experts on build-to-suit development, logistics/supply chain, commercial leases, and investments. He is a principal with Auburndale Realty Co. in Newton, Mass.

FM 106 | Carl Pearson, vice president of Global Property Developers Corporation, brings more than 30 years of experience in the fields of real estate, environmental consulting, contracting, and health and safety services.

OCRE 203 | Thomas Pereira, vice president and director of structured finance at Boston Capital Corporation, is responsible for the tax credit platform's proprietary accounts, portfolio

structuring, deal pricing, and arranging credit facilities for all low income housing partnership.

RE 113 | Michael L. Price directs Legacy Real Estate Ventures, LLC, focusing on acquisitions.

RE 142 | Nathaniel Razza, CPA, senior manager in KPMG's federal tax practice in Boston, has extensive experience with real estate investment, development, and leasing companies.

FM/RE 109 | Michael J. Reilly, FSMPs, founder and principal of Reilly Communications, concentrates on helping organizations and individuals become more successful through improved communication skills—speaking, writing, selling, negotiating, and persuading.

RE 112 | Robert Turnipseed, director of corporate and commercial real estate credit at State Street Bank, has spent nearly thirty years in credit, at various regional and national banks. He previously spent seven years at Citizens Bank as an executive vice president with responsibilities including portfolio analytics and reporting for the bank, strategy and portfolio analytics for the commercial real estate business, and senior credit officer for community development lending.

FM 105 | Mark Urbanek, founder and principal of C.R.E.SOURCE Consulting, has many years of experience in corporate real estate, having directed facility planning, site selection, leasing, and project management functions at various *Fortune* 100 companies.

RE 125 | Gregory Vasil, president and CEO of the Greater Boston Real Estate Board. Under his leadership since 2005, the board has nearly doubled its membership and is involved in development, financing, residential and commercial brokerage, as well as commercial and residential property management.

FM 107 | Mark Warren, managing director/senior vice president at WSP, has extensive experience in evaluating energy options, system commissioning, and optimization of HVAC and energy operations for various facilities.

RE 107, 108 | Marc J. Wexler, chief operating officer at Equity Industrial Partners Corporation, has been responsible for a full range of activities for over 5.2 million square feet of commercial property as well as asset management, acquisition, disposition and/or financing assignments for over 35,000 multifamily units.

Program Director Jonathan Keefe

Currently managing director of strategic consulting at Cushman & Wakefield in Boston, Jonathan has over 30 years of executive experience managing real estate transactions, projects, operations, and consulting assignments across industries that include telecommunication, insurance, health care, financial services, manufacturing, and technology. He was a real estate consultant at Ernst & Young for several years and led the real estate and facilities departments at StorageNetworks and Tufts Health Plan. Jonathan

previously served as regional vice president at Diamond Heritage Properties, an East Coast private equity firm, and as director of real estate development at a subsidiary of NYNEX (now Verizon). A member of the board of directors for CoreNet Global's New England chapter and licensed real estate broker, he has overseen transactions throughout the United States, Europe, and Asia. Jonathan holds an undergraduate degree in civil engineering from MIT and an executive MBA from Boston University.

COURSE DESCRIPTIONS

RE 104 Commercial Lease Analysis

This course covers the business drivers of a commercial lease. Various elements of office, industrial, and retail leases will be defined and debated from the perspectives of landlords, tenants, and lenders. Strategic business points are highlighted so that all parties can better interpret a commercial lease and focus on pertinent, red-flag negotiating issues. Access to a financial calculator is required.

Topics: Revenue and expense structures; identifying key issues in a lease agreement/ clause; building terminology and characteristics; conflicting landlord/tenant objectives; designing a letter of intent; interpreting the lease document; and strategies for lease negotiations.

RE 106 Overview of the Real Estate Development Process

This course provides a practical overview of the real estate development process and the tools to carefully analyze a development or redevelopment project from a return and risk management perspective. Students will examine specific development projects and determine best practice development processes to apply.

Topics: The role of each member of a development team; entitlements; key terms in construction and lease contract negotiations; market research techniques; development budget preparation; financial analysis and project financing; and design and operating guidelines for major property types.

Prerequisite: Fundamentals of Investment Analysis (RE 107) or equivalent experience with discounted cash flow analysis.

RE 107 Fundamentals of Investment Analysis

This course introduces and develops students' understanding of the financial analysis techniques necessary to make effective decisions about the acquisition, development, financing, and disposition of investment property, as well as lease v. lease analysis. Access to a financial calculator is required.

Topics: Time value of money; alternative analysis; appraisal valuation; aftertax discounted cash flow analysis; net present value; internal rate of return (IRR); investment decision rules; income capitalization; debt coverage ratios; and mortgage financing.

RE 108 Advanced Real Estate Investment Analysis: Case Studies

This intensive course uses complex case problems to develop skill and perspective in analyzing the risks and rewards of alternative real estate investments. The course includes the risk underwriting of a case selected by the student from his or her work environment (or provided by the instructor). Access to a financial calculator is required.

Topics: Advanced discounted cash flow analysis; advanced investment decision framework; individual student-directed case studies; and risks and rewards of alternative real estate investments.

Prerequisite: Fundamentals of Investment Analysis (RE 107) or equivalent experience with discounted cash flow analysis.

RE 109 Leadership and Executive Presence

Leadership in business today requires a solid foundation in essential, practical skills. This course will prepare students to advance as organization leaders by improving personal effectiveness and enhancing professional skills, including executive presence; strategy; communication, particularly business writing; and persuasion. Students will learn how to develop a strategic plan to advance the organizational mission.

Topics: Personal effectiveness; leadership development; team and relationship building; writing, presentation; networking, business development, and negotiation.

This course is cross-listed as FM 109 Advancing Leadership and Presentation Skills.

RE 112 Fundamentals of Real Estate Finance

This course introduces students to basic debt and equity issues as well as techniques essential to understanding and evaluating real estate as an investment vehicle. It is intended to be an overview of a number of finance topics, some of which are expanded upon in later courses.

Topics: Overview of real estate capital markets; market analysis, physical and economic characteristics of major property types; lenders' financial analysis and underwriting; and real estate financing instruments.

RE 113 Fundamentals of Market Analysis

This course is for real estate professionals who want to learn how to understand and perform market analyses. Participants will be taught the general requirements and data sources necessary to conduct a market study and how this influences the acquisition, financing and development decision-making process. Guest speakers from various industry sectors will

provide their insights on relevant and current topics. Case studies will be utilized, and a local market study will be prepared as part of the course. Sophisticated quantitative analysis is not required.

Topics: Elements of a market study; finding and utilizing data; critical differences in market studies between industry sectors; market study utilization and requirements from the lender, broker and investor/developer perspectives; specific discussions on residential, mixed use, retail, and office projects; and how market information is utilized to create a successful project.

RE 116 Underwriting the Commercial Mortgage

This course provides a practical and in-depth examination of commercial lending. It explores fundamental risks and loan structures to mitigate those risks, legal considerations, and common business issues. Participants evaluate preliminary financing requests, review the conditions often presented in construction and permanent loan applications, and apply that information to underwriting the loans requested.

Topics: Elements of underwriting; loan interview; underwriting procedures; basic transaction negotiations; loan submission packages; mortgage case study; new lending trends; niche lending; and the basis for legal documentation.

Prerequisites: Fundamentals of Investment Analysis (**RE 107**) and Fundamentals of Real Estate Finance Analysis (**RE 112**).

RE 119 Real Estate Capital Markets

The commercial real estate industry is a voracious consumer of third-party capital, which may take the form of debt, equity, or a combination of the two. In recent years, the public markets have become an increasingly important yet volatile force that, when combined with the traditional private channels of debt and equity finance, has resulted in an ever-widening array of financial alternatives.

Topics: This course examines alternative capital sources by comparing and contrasting the types that are available to a project from a variety of suppliers, including commercial banks and thrifts; insurance companies; pension funds; conduit lenders; credit companies; and REITs.

Prerequisites: Fundamentals of Investment Analysis (**RE 107**) and Fundamentals of Real Estate Finance Analysis (**RE 112**). Underwriting the Commercial Mortgage (**RE 116**) is recommended.

RE 123 Physical Evaluation of Real Estate Assets

This course provides real estate professionals with a high level, working knowledge of the construction techniques, materials, and building systems used in modern construction. This information is particularly helpful in learning to identify typical risks and deficiencies involved in property ownership. A field trip to inspect a commercial building allows students to put theory to practice.

Topics: Site evaluation; foundations and structures; roofing; electrical distribution systems; HVAC systems; plumbing; fire protection; Phase-one elevator inspection; physical deficiencies; and costs of correction. This course may be taken as an elective in the Facilities Management program.

RE 125 Practical Legal Knowledge for the Real Estate Professional

This course provides a practical, in-depth examination of many legal issues essential for the understanding of real estate investment, development, and operations, as well as how the rules and regulations made by local, state, and the federal government affect real estate in general. Participants develop a working knowledge of laws affecting financing, acquisition, leasing, sale, and the documents associated with those events.

Topics: Basic legal theory of real estate; forms of ownership and choice of entity; purchase and sale agreements; deeds; closings; mortgage, promissory notes, and other collateral loan documents; lender remedies (including foreclosure); title and title insurance; and leases.

Licensed attorneys can waive this course if getting the REFA certificate. An extra elective will be required as a substitution.

RE 132 Managing Multi-Family Housing

This course teaches students what all successful apartment managers need to know to maximize occupancy, minimize turnover, and realize a property's full economic potential. A comprehensive introduction to all types of rental housing management, the course provides the knowledge needed to improve management performance and diversify students' ranges of marketable skills.

Topics: Development and implementation of sound management policies; building a productive, skilled staff; effective marketing and leasing techniques; managing maintenance operations; building good resident relations; and the fundamentals of expense budgeting and record keeping. This course may be taken as an elective in the Facilities Management program.

RE 140 Fundamentals of Real Estate Transactions

This course will focus on basic aspects of commercial real estate transactions, including the role of the real estate broker; terms and negotiation of offers to lease and purchase; identification of common terms of purchase and sale agreements and real estate due diligence; term and construction loan financing (including documentation and due diligence); aspects of holding title in Massachusetts; and transactions concerning leases (including basic terms, subordination agreements).

Topics: Contents and negotiation of offers to purchase and lease; purchase and sale contracts; real estate due diligence; commercial financing transactions, including documentation and due diligence; leasing basics, including terms and subordination agreements.

RE 142 Finance, Accounting, and Taxation of Real Estate

This class will provide students insight into the taxation, accounting, and finance of real estate. The course will examine the key financial drivers and metrics associated with both the asset and ownership entity. This course will also cover the pending lease accounting changes.

Topics: Accounting and tax overview; reading and understanding financial statements, GAAP accounting and standards including FAS 13, 66, and 46; federal taxation real estate acquisitions, disposals and operations including depreciation methods, tenant-landlord relationships, sales of real estate and recent tax developments.

RE 175 Argus Cash Flow Modeling

This course covers the use of the Argus software application. With a focus on cash flow modeling theory, case studies will help students practice the creation, maintenance, and reconciliation of Argus models. Students will be able to develop Argus runs on their own with a practical understanding of the product's advanced features. Students may purchase a limited-life student version of the software for personal use.

Topics: Rental income; operating expenses; capital expenses; market leasing assumptions; and recoveries. Investment sales, acquisitions, and asset management case studies will be used. Topics include most real estate property types including office, industrial, and retail.

Prerequisite: Students should be comfortable with basic real estate terminology and financial measurements. Fundamentals of Investment Analysis (**RE 107**) is recommended, but not required.

RE 203 Managing Commercial Properties

This course teaches the fundamentals of commercial property management, focusing on office buildings, shopping centers, and industrial sites. Students will discover the similarities and differences in management techniques for various property types and learn how to apply them successfully and profitably.

Topics: Effective techniques for marketing and leasing; fundamentals of good property maintenance; developing a profit-oriented budget; principles of lease administration; emergency procedures planning; organization and operation of management firms; and developing owner reports. This course may be taken as an elective in the Facilities Management program.

FM 101 Fundamentals of Facility Management Systems and Practices

This is a foundation course focused on the facility manager as a member of the core business team, assisting an organization to anticipate and respond to both internal and external customer needs. Participants learn about the multifaceted role of the facility manager and how to plan and manage facilities more effectively.

Topics: Facilities goal setting; performance evaluations; benchmarking; value engineering; project management and scheduling; contracting and procurement; communications; and decision-making techniques.

FM 102 Facility Planning and Design Management

This course covers the design development process from initial planning and needs assessment through final design documents and construction administration. The course will enable students to manage the design and planning process, including both the user and owner stakeholders and design team professionals.

Topics: Needs assessment; designer team selection; design contracts; estimating and budgeting; scheduling; entitlements and approvals; program development; schematic through construction drawings; life cycle cost analysis and value engineering; construction procurement; and contract administration.

FM 103 Facility Construction and Project Management

This class focuses on the construction management of facility construction, alteration, tenant improvement, and major repair or replacement projects throughout all phases of a project, pre-design through post-occupancy. The

roles and responsibilities of the project team are discussed with respect to their involvement in each phase of the project. An off-site field trip to an active construction site is included.

Topics: Pre-construction services and value engineering; budgeting; scheduling; design and construction RFP development; contracting methods (e.g., CM, lump sum, cost plus); Architecture and Mechanical, Electrical, and Plumbing (MEP) review and coordination; permitting; contractor qualification and selection; contract documents; team building; construction oversight and change order management; inspection of work; project controls; punch lists; startup and commissioning; warranties; cost reporting; and project close-out.

FM 104 Facility Operations and Maintenance Management

This course is focused on management techniques required to develop an efficient and responsive facilities team. Students will develop a comprehensive understanding of the variety of disciplines, roles, and responsibilities required of a modern facilities maintenance organization.

Topics: Facilities personnel recruiting; position descriptions, training, and management; developing an effective work order request and tracking system; preventive maintenance; custodial services; communication (written and oral); writing effective contracts; Key Performance Indicators (KPI); negotiating and managing vendors; and creating and managing operating and capital budgets.

FM 105 Facility Financial Management

Facility managers are called upon to estimate and manage capital and operational budgets as well as support facility-related financial decisions. This course provides insight into the financial planning and management roles of the facilities manager.

Topics: Financial accounting principles and practices; balance sheet and operating statement analysis; capital and operational budgeting; deferred maintenance and budget justification; charge-backs and allocations; facility budget factors in leasing; life cycle cost analysis; time value of money; capital decision-making; benchmarking.

FM 106 Environmental Health and Safety for Facility Managers

This course discusses the important functions needed to ensure the health and safety of occupants and to minimize risk. The student will be exposed to major applicable EHS regulations and compliance issues.

Topics: OSHA and the inspection process; environmental and property due diligence; ASTM

methodology; indoor air quality investigation; loss prevention and physical security; workplace violence prevention; fire protection and life safety engineering; establishment of a facility-specific program for preservation of life/property; EHS audit parameters; selection of an environmental, health, and/or safety consultant; and other risk management and compliance considerations for the facility manager.

FM 107 Building Systems

This class is designed to give students an understanding of today's increasingly complex building systems. The course is geared toward the non-design professional who is involved with the analysis, purchase, sale, lease, or operation of real estate and who needs to understand the value, costs, and functional implications of various building components.

Topics: HVAC and building controls; sustainability; normal and emergency electrical power, fire alarms and life safety, and infrastructure distribution systems; plumbing systems; and fire suppression systems.

FM 108 Security Management for the Facility Manager

This course will provide the student with an overview of security-related risks and best practices for managing facility-related security issues.

Topics: Security management models; risk management models; security terminology; risk analysis methodologies; the vendor selection process; physical security guidelines; internal investigations; terrorism awareness; and business continuity and emergency planning.

FM 109 Leadership and Executive Presence

Leadership in business today requires a solid foundation in essential, practical skills. This course will prepare students to advance as organization leaders by improving personal effectiveness and enhancing professional skills, including executive presence; strategy; communication, particularly business writing; and persuasion. Students will learn how to develop a strategic plan to advance the organizational mission.

Topics: Personal effectiveness; leadership development; team and relationship building; writing, presentation; networking, business development, and negotiation.

This course is cross-listed as RE 109 Advancing Leadership and Presentation Skills.

Online Certificate in Commercial Real Estate Practice

Commercial real estate requires a diverse set of competencies to be successful. Our six-course online certificate program provides career enhancing education across the entire real estate value chain. Students will learn the essential skills of analyzing, acquiring, financing, constructing, and operating commercial real estate assets. Each course stands alone and is not dependent upon the other courses—so you may take just one, more, or all courses over a year or two. (Courses do not transfer between the online and on-campus programs.) The certificate in Commercial Real Estate Practice is awarded when all six courses have been successfully completed.

Courses are offered on a rotating basis six times per year: September, November, January, March, May, and July.

OCRE 201 Real Estate Investment and Risk Analysis

OCRE 202 Overview of Asset Classes and Transaction

OCRE 203 Real Estate Finance and Market Analysis

OCRE 204 Real Estate Due Diligence

OCRE 205 Real Estate Design, Construction,
and Project Management

OCRE 206 Real Estate Property and Facility Management

Students may elect to take one or more courses, in any order.

TUITION REIMBURSEMENT

Many companies offer tuition reimbursement for continuing education courses, particularly if they lead to a specific designation.

We offer a 10% team discount when three or more employees of the same organization register for the same class at the same time.

METROPOLITAN COLLEGE COURSE WAIVERS FOR CPE ALUMNI

Students who earn a Center for Professional Education certificate in Commercial Real Estate or Real Estate Finance may apply coursework toward the Master of City Planning degree programs at Boston University's Metropolitan College. Upon admittance to the program, a waiver of three graduate elective courses (12 credits) will be granted.

For more information, contact the Department of Applied Social Sciences at 617-353-3025.

Learn More

Phone: 617-353-4497

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Email: cpe@bu.edu

**For a complete
schedule,
please visit
cpe.bu.edu.**

Please note that course fees do not include textbooks or other student materials, which must be purchased separately.

Boston University reserves the right to change the policies, fees, curricula, or any other matter in this publication without prior notice and to cancel programs and courses.

