

II. Course of Study

A. Description

The primary objective of the proposed Master of Science in Global Real Assets is to develop leaders capable of responding to critical challenges facing our world by creating shared value through the prudent management of real assets, including infrastructure, real estate, and other key components of the built environment. The three pillars of the program (ESG, business, and infrastructure) include 22 courses of 1.5 credits each. The selection and sequence of the specific courses enable an integrated offering that provides an intense and rewarding learning experience. A more detailed description of the curriculum will be presented in Section C. below.

B. Admissions Requirements

Admissions will be managed through the McDonough School of Business. An admissions committee will be responsible for the marketing and recruitment of the inaugural cohort of MS-GRA students in collaboration with an external marketing agency partner. Important admissions requirements and deadlines to be managed by the admissions team are provided below.

Terms and Deadlines

The first MS-GRA cohort will begin classes in August 2023 and applications will be accepted according to a series of defined deadlines to encourage applicants to apply early. Following the inaugural cohort, we plan to welcome a subsequent cohort in August 2024. Market demand will drive the exact timing and number of intakes each year thereafter.

Application Requirements

All applicants to the program will submit the following materials:

- Application form (via online portal)
- Current resume/curriculum vitae
- Bachelor's degree from an accredited university and proof of diploma
- Personal Statement
- One letter of recommendation
- Evaluative interview and case study (by invitation only)
- Official academic transcripts (officially translated, if not in English, and evaluated if international)
- Official TOEFL (minimum 100) or IELTS score (minimum 7.0), for non-native English speakers
- Non-refundable application fee (\$95)
- GRE or GMAT (optional)

The admissions process will be rigorous, similar to our current programs, to yield high-quality students. Depending on each student's educational, technical, and work background, pre-degree workshops or courses may be recommended as part of the admissions process.

Insofar as academic qualifications, the Admissions Committee plans to evaluate the whole person in terms of a variety of characteristics. Each is briefly highlighted below:

- **Academics:** Applicants will have completed at least a bachelor's degree from an accredited academic institution. Applicants may have also completed other graduate degrees. Grades, the type of degree, courses taken, and related academic qualifications will be given serious consideration. Typically, the Admissions Committee will look favorably upon students with a B+ or better average in their academic degree.
- **Test Scores:** Prospective students will not be required to submit test scores from either the GRE or GMAT standard examinations, nor will they be discouraged. If a candidate chooses, these scores can provide another data point for evaluation.
- **Experience:** While students may apply without work experience, the Admissions Committee expects the majority of applicants will have up to five years of work experience. The type and quality of that work experience will be evaluated in terms of understanding the whole person applying to the program. In addition, other forms of non-work experience will be given serious consideration by the committee. For example, volunteer work, extracurricular activities during college, leadership positions held in non-work organizations, and special awards and achievements received will be considered.
- **Other Factors:** Letters of recommendation and the applicant's own abilities to write and communicate will be given serious consideration as part of the application process. For example, the written essay and any interviews (in-person or online) will contribute to better understanding the qualifications of the whole person.

C. Course Descriptions

The 33-credit MS-GRA curriculum is lockstep, in that all students will have the same schedule of courses as a cohort. Future versions of the curriculum may include electives. The exhibit below provides a curriculum overview:

MS in Global Real Assets: Proposed Curriculum										
Opening Residency	Fall Semester (Mod 1 and Mod 2)				Spring Semester (Mod 3 and Mod 4)				Summer Term / Global Trek	
Real Assets on a Global Scale (1.5cr)	Finance for Sustainability Management (1.5cr)	Real Estate Private Equity (1.5cr)	Using Environmental Data & Analytics to Lead Change (1.5cr)	Private Debt (1.5cr)	Accounting for Sustainability Management (1.5cr)	Infrastructure Finance (1.5cr)	Underwriting Real Assets with an ESG Lens I (1.5cr)	Real Estate Public Equity (1.5cr)	Public Debt (1.5cr)	Sustainable Infrastructure on a Global Stage I (1.5cr)
Integrating an ESG Real Assets Strategy (1.5cr)	Firm Analysis and Strategy (1.5cr)	The Business of Sustainable Energy (1.5cr)	ESG Investing (1.5cr)	Housing Markets and Social Infrastructure (1.5cr)	Net Zero – A Real Assets Strategy (1.5cr)	Ethical Leadership (1.5cr)	Underwriting Real Assets with an ESG Lens II (1.5cr)	Digital Infrastructure (1.5cr)	Transportation Infrastructure (1.5cr)	Sustainable Infrastructure on a Global Stage II (1.5cr)
Program Highlights <ul style="list-style-type: none"> • 100% in-person curriculum and meaningful international exposure • Administered at one of Georgetown University's Campus Sites • Program Requirements and Length: 33 Credits over 12-months • The key program components are color-coded to the courses above 						Color Coded Core Components of Real Assets Curriculum <ul style="list-style-type: none"> Infrastructure and Real Estate ESG Business 				

More detailed descriptions of the structure of the residencies and each course are provided below:

OPENING RESIDENCY (3.0 CREDITS)

The opening residency is designed to accomplish several important objectives with each cohort of students. The first is to establish interpersonal connectivity between and among faculty and students who will be engaged in the program. The second is to provide two key introductory courses relevant to global real assets and the ESG criteria. The third is to explain the purpose of the Global Trek during the Summer Term as an integrating experience of practice and purpose with the program's objectives. Two courses are offered during this opening residency and briefly described below.

- **Real Assets on a Global Scale (1.5cr)**

This course as taught within the opening residency will seek to level set students with a basic understanding of real assets in terms of the universe of product types and the manner that these assets are owned in mixed-assets portfolios. Students will gain solid understanding for the global context of this investment type and where variations exist between countries. An environmental, social and governance lens will be applied to all course discussions as well as grading components. Liberal use of speakers within our Washington DC home will be made.

- **Integrating an ESG Real Assets Strategy (1.5cr)**

A critical aspect of any organization's success is the development of a strategic plan that incorporates all stakeholders united in a common vision. Real assets firms are learning that the definition of their strategic approach needs to be broader to incorporate a commitment to issues of environment, social and governance (ESG) and to make these principles implicit to who they are as a firm and what they do. This course will educate students in the strategic planning process for a real assets firm that wishes to make ESG central to their business.

FALL SEMESTER COURSES (12.0 CREDITS)

● Finance for Sustainability Management (1.5cr)

This course develops the analytical capabilities for making financial decisions in corporations and nonprofits. The course focuses on the following topics:

- The mathematics of time value of money and discounted cash flow analysis;
- The decision rules that corporations can use to determine which projects to accept; and
- The tradeoff between risk and return and the fundamentals of portfolio theory.

● Firm Analysis and Strategy (1.5cr)

This course provides a conceptual foundation in strategic analysis and design. It introduces frameworks, tools, and concepts that enable practitioners to effectively think and act strategically when making critical business decisions. The course foundations are drawn from the field of microeconomics and applications to competitive strategy. Realizing most business organizations operate in competitive markets, this course enables managers to develop business and marketing strategies that enhance an organization's performance over that of its rivals and position the firm for long-term success.

● Real Estate Private Equity (1.5cr – cross listed as FINC 558)

This course provides an introduction to the world of private equity real estate investment with a particular focus on answering the question, “What is the real estate asset worth?” Lectures will consider the thought process and mechanics implicit in establishing an asset's value via proforma statement construction and discounted cash flow methodology. Lectures will be delivered from the perspective of an equity investor with the intention of instructing each student on the proper approach to measuring the return generating potential and risk associated with a real estate transaction. This approach will broadly cover the physical and the financial aspects of the investment but will delve into a variety of subtopics including leverage and income tax considerations. Students will gain a broad understanding of the institutional real estate world and how circumstances in the current market impact the ability to acquire (and dispose) of real estate assets. The course will also employ a case study approach for applying the course concepts to practical real estate problems.

● The Business of Sustainable Energy (1.5cr)

This course surveys how economic value is created in the energy industry across a wide spectrum of sectors, including oil and gas, transportation, and electricity generation. The main objective is to familiarize students with the evaluation of economic and environmental implications of traditional and innovative business models in the energy industry. The course focuses on the challenges and opportunities associated with the transformation to a renewable energy future using innovative business models that are both economically and environmentally beneficial. As such, the course investigates business models for renewable energy sources, such as solar and wind energy, as well as for urban mobility, such as electric vehicles.

● Using Environmental Data & Analytics to Lead Change (1.5cr)

This course focuses on developing the quantitative skills necessary for identifying and analyzing socioenvironmental data. Using a hands-on, experiential approach, students learn basic methods to build and manage databases. They also study the basics of descriptive and inferential statistical methods, including exploratory data analyses, and basic linear and logistic regressions.

Introductions to multivariate analysis and model selection complement the development of analytical skills. The course provides students with experience in the application of statistical methods and the use of open-source statistical software, R. Students also learn the importance of using such analytics to lead change in the context of an original research project and for the Capstone.

- **ESG Investing (1.5cr)**

This course is geared towards students in business schools and also programs geared towards environment and sustainability management. We will examine issues related to Environmental, Social and Governance (ESG) investing. Topics covered include:

- ESG Performance – What has been the historical risk and return of incorporating ESG factors? Are there costs to ESG investing?
- ESG Ratings – Who are the different raters? How are ratings estimated? What do the ratings measure? What are the similarities and differences between the ratings?
- Investors – Why have investors become interested in ESG? How do institutional investors consider the tradeoff between fiduciary responsibility, performance, and other factors?
- ESG Factors – How are ESG factors incorporated in investment and portfolio decisions? How do they impact performance? What is the role of active managers versus passive indexing?
- Companies – How are companies responding and incorporating ESG?
- Do investors vote with their feet (portfolio composition) and/or vote with their voice (proxy voting and engagement)?
- Policy and Regulatory Issues – Is ESG disclosure by companies needed? If yes, what form should it take?

- **Private Debt (1.5cr – cross listed as FINC 568)**

Debt financing is an integral part of value creation in real estate. Yet, beyond returns, often investors will not spend commensurate time to understand and analyze their financing and capital markets strategies that could add value through risk mitigation and enhanced financial performance. The choices made in financing a transaction (e.g., terms, costs, covenants) should reflect and support the investors' strategy for maximizing value throughout the hold period (i.e., buying, operating, and exiting).

In this course, we will take a strategic view of the debt financing of real estate. As such, we will:

- Review the fundamentals of debt instruments.
- Learn the various types of debt instruments used to finance real estate assets.
- Assess the risks and rewards associated with using various forms of debt.

Particular attention will be paid to economic terms (e.g., rate, duration, amortization), covenants (e.g., assumability, recourse, key principal obligations), and the interests and motivations of both the borrower and the lender. The objective of the class is to give students a framework on how to use the various forms of debt, and how to balance the various elements of a loan when making the financing decision. We will primarily use multifamily properties for case studies, though other property types will be discussed from time to time.

- **Housing Markets and Social Infrastructure (1.5cr)**

This course is focused on providing the student with an in-depth understanding of the housing market in terms of function and economics. The provides a solid foundation in the fundamentals of housing from a supply/demand perspective and considers both single-family and multi-family assets. Our Washington, DC location will provide tremendous insight and access to the policy behind housing and the implications to the current housing market. Students will gain exposure to issues of affordable housing both in terms of market dynamics as well as policy.

SPRING SEMESTER COURSES (12.0 CREDITS)

- **Accounting for Sustainability Management (1.5cr)**

This course provides an overview of financial reporting by for-profit and nonprofit organizations, and how differences between the two can meet the needs of different constituents. The course discusses two types of non-financial reporting important for sustainability professionals: corporate social responsibility (CSR) reporting and sustainability accounting (which focuses on environmental, social capital, human capital, business models, and leadership/governance). Students in this course learn to better understand the financial and non-financial information reported by their future employers and their suppliers, customers, competitors, and strategic partners.

- **Net Zero – A Real Assets Strategy (1.5cr)**

Firms involved in the real assets industry are starting to make declarations in terms of their net zero ambitions both as a firm, which impacts their business operations, and in the manner that they look at investments. This course will introduce the student to the challenges of moving to a net zero reality within a global real assets context. Focus will be paid at the enterprise level, but discussion will also be had relating to the challenges of migrating to a net zero reality within the context of an individual asset.

- **Infrastructure Finance (1.5cr)**

The U.S. municipal capital market is unique among those in the world. There is currently over \$3.7 trillion dollars of municipal debt issued in the United States. Every year, state, city and local governments bring to market billions of dollars in new issues to fund all manner of infrastructure be it roads, bridges, airports, sports stadiums, hospitals, low-income housing, educational facilities, mass transit systems, water and sewer systems and not for profit institutions. This market has shaped the economic development of the United States, its states, and municipalities. The purpose of this course is to provide an in-depth understanding of municipal finance both in terms of how it functions and how infrastructure is both developed and financed in America. This course is well-suited for those who will be working in investment banking and finance, public sector finance and administration, public sector consulting and related areas such as public policy, project finance, healthcare, sports management, transportation, real estate, not for profit management and sustainable growth.

- **Ethical Leadership (1.5cr – cross listed as STRT 550)**

Ethical Leadership is designed to deepen your understanding of the ethical and social dimensions of business in general and corporate leadership in particular. At its conclusion, you should have the know how to evaluate and lead the ethical performance of organizations—from teams to enterprises and from the top to the trenches. You should have an acute awareness of the heightened social demands on firms and how leaders are anticipating and managing this expanding responsibility. Finally, you will have the opportunity to examine and reflect on your profile as an ethical leader and to formulate strategies for making the most of your upcoming leadership opportunities.

- **Underwriting Real Assets with an ESG Lens I (1.5cr)**

This class is designed to prepare students for MBA level careers at institutional real estate investment firms by exposing them to the practice of underwriting real estate investments. Through a Clinic, students will have the distinct benefit of being able to underwrite the “Four Main Food Groups,” i.e. office, multi-family, industrial, and retail product across the United States so they develop a broad understanding of many different asset types, and also learn how underwriting is impacted by geography. The Clinic will also provide extensive exposure to real estate technical tools in the form of Excel and Argus. The first three weeks of the course will focus exclusively on the multi-family asset with dedicated work to model comprehension and underwriting strategy. The second three weeks will involve deal underwriting using three specific deals that will be underwritten by each student.

- **Underwriting Real Assets with an ESG Lens II (1.5cr)**

This class, the second in the series, is designed to prepare students for careers at institutional real estate investment firms by exposing them to the practice of underwriting real estate investments. Students will have the distinct benefit of being able to underwrite the “Four Main Food Groups,” i.e. office, multi-family, industrial and retail product across the United States so they develop not only a broad understanding of many different asset types, but they learn how underwriting is impacted by geography. The Clinic will also provide extensive exposure to real estate technical tools in the form of Excel and Argus Enterprise. The Clinic in this course will focus entirely on the commercial asset.

- **Real Estate Public Equity (1.5cr cross listed as FINC 569)**

The instructor for this course is a former CFO of a publicly traded REIT. The course will seek to develop a deep understanding of the modern real estate investment trust (REIT), and its role in today’s capital and real estate markets, viewed from the perspective of the C-suite executive. It will cover the different types of REITs, as well as the various statutory requirements. There will be a comprehensive review of REIT valuation metrics and corporate financial structures. We will also examine growth strategies, including merger and acquisition transactions. Finally, we will review the primary factors investors should consider when investing in REITs. The course will combine lectures on the underlying principles and theory with specific case studies of current industry leaders that demonstrate their practical application. Other industry professionals with unique insights will be presenting some of the materials used in the class.