

# Real Estate Design and Development

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## Into which MS degree will this Graduate Certificate convert?

This certificate can lead into the current MS Arch degree. M Arch students may also take the courses of the certificate as elective courses and apply them for both (the certificate and their M Arch degree). We are also in the process to restructure the MIP degree and rename it Master of Urban Design. Once this degree is available this certificate can also lead towards that degree.

## In what industries might a holder of this Graduate Certificate find employment?

This certificate will be for architects that would like to expand into real estate development. This certificate will provide an essential understanding of real estate development combined with cutting edge technologies to be competitive in this field.

## In what job titles might a holder of this Certificate fit?

Architect, Real Estate Developer

## Is this certificate fully available online (all courses)?

Yes

## Description of certificate program

Data driven technologies provide a new depth of understanding of the needs of individual citizens and communities. At the same time a deep knowledge of history and culture of a place and a productive relationship with communities, local leaders and government officials is necessary to act responsibly to benefit society and the environment. This certificate will introduce you to the terms, concepts, strategies and theories on real estate. Courses will provide an overview of commercial real estate and the private property market. You will also learn data driven tools used in analysis, property valuation, financing, investment and management and monitoring the construction and maintenance of buildings.

The 12 credit Graduate Certificate in Real Estate Design and Development is comprised of 4 courses for those who wish to gain the skills necessary to be competitive as a real estate developer.

## What are the Required Courses?

(12 credits) Students have to select 4 courses from the following course offerings:

### **ARCH 651 Public and Private Development;** 3 credits, 3 contact hours

Introduction to the economic, financial and political aspects of real estate and their effect on architectural decision-making. Topics include: needs assessment, real estate appraisal, financial instruments, regulations and real estate, design as value-adding, and the effect of tax policies on real estate development. This course is required for the dual degree M.Arch./MS in Management program. It can also be used as an elective in the M.Arch. program.

### **ARCH 654 Land Remediation and Community Revitalization;** 3 credits, 3 contact hours

This course introduces students to the process of transforming legacy industrial and vacant commercial properties into community assets. Viewing land remediation and redevelopment through the lens of the triple bottom line, the students will explore ways in which transformation of these properties can improve environmental conditions, catalyze economic development, and create more socially equitable and resilient communities. Students will interact with local government officials, real estate developers, environmental consultants, attorneys, and community planners. Course topics will include: environmental laws and regulations, real estate development, cleaning up contaminated properties, community engagement, environmental justice, gentrification, and transformative land uses.

### **ARCH 677 Geographic Information Systems;** 3 credits, 3 contact hours

Prerequisite: course or working knowledge of CADD or permission of instructor. Geographical/Land Information System (GIS/LIS) is a computerized system capable of storing, manipulating and using spatial data describing location and significant properties of the earth's surface. GIS is an interdisciplinary technology used for studying and managing land uses, land resource assessment, environmental monitoring and hazard/toxic waste control, etc. Introduces this emerging technology and its applications.

### **ARCH 684 Topics of Sustainable Urbanism;** 3 credits, 3 contact hours

Cities are growing at an unprecedented speed. Cities currently account for about 70 percent of global carbon emissions and over 60 per cent of resource use. We have to develop a vision for more sustainable cities and new protocols and processes to implement more sustainable vision for urban areas. This course will provide an inside into challenges we face (growing number of slum dwellers, inadequate infrastructure and services) and on solutions to address them.

**FIN 600 Corporate Finance I;** 3 credits, 3 contact hours

This course introduces concepts and analytical tools to identify and solve Financial Management problems. After introducing the corporation, the course focuses on how firms invest in real assets (capital budgeting) and how they raise money to pay for assets (financing). Practical problems in valuing bonds, stocks and other investments will be based on the time value of money. The trade-off between risk and return will be introduced with the Capital Asset Pricing Model.

**FIN 611 Intro to Topics in Fin Tech;** 3 credits, 3 contact hours

The financial services industry is presently undergoing dramatic changes as recent technological advances have enabled the automation of former workflows. This course will survey current trends in the Financial Technology (FinTech) industry. Students will have the opportunity to develop their own software related to FinTech ideas discussed during this course.