

ARCHITECTURE COURSES

UNDERGRADUATE PROGRAM

In the undergraduate program, emphasis is placed on student competence in design inquiry/research, architectural history, human behavior and environment, technical systems, computer usage, professional practice and complemented by elective courses in general/liberal education-- natural sciences, humanities and social sciences. Awareness of these areas provides the student with fundamental communication skills through critical thinking, conflict resolution, visual literacy and the knowledge of forces that shape magnificence societal and human affairs, as well as the impact of new technologies in an ever-changing world.

Students seeking the Bachelor of Architecture degree must complete a minimum of 171 credits. The general and detailed curriculum is shown below with credits on the right. Follow the linked course titles for a description of the course. Lists of all Architecture and Design [course descriptions](#) are also available.

English	6
Mathematics	7
General /Liberal Studies (Electives)	34
Architectural Design	50
Architectural History and Theory	27
Architectural Technology	27
Architectural Professional Electives	20
Total	171

Bachelor of Architecture - Five Year Professional Degree Program

Freshmen 1st Year

Fall Semester		Spring Semester	
Math-006 College Algebra I	3	Math-007 Pre-Calculus	4
Engl-002 English I	3	Engl-003 English II	3
Arch-003 Environment/Arch	3	Arch-011 Elements of Arch	3
Arch-150 Design Comm. I	3	Arch-151 Des. Comm. II	3
General /Liberal Studies (core)	3	General /Liberal Studies (core)	3
PHED	1	PHED	1
Total	16	Total	17

Sophomore 2nd Year

Fall Semester		Spring Semester	
Arch-199 Design I	6	Arch-200 Design II	6
Phy-008 Physics for Architects	5	Arch-302 Architectural Hist Surv. II	3
Arch-301 Architectural Hist Surv. I	3	Arch-402 Materials & Methods II	3
Arch-401 Materials & Methods I	3	Arch-511 Computer Appli. in Architecture	3
		General /Liberal Studies (core)	3
Total	16	Total	18

Sophomore 3rd Year (Lower Junior)

Fall Semester		Spring Semester	
Arch-201 Design III	6	Arch-202 Design IV	6
Arch-521 Environmental Systems I	3	Arch-651 Principle of Urban Design	3
Arch-501 Structures I	3	Arch-522 Environmental Systems II	3
Arch-901 Programming	3	Arch-502 Structures II	3
Arch Professional Elective	3	Arch Professional Elective	3
Total	18	Total	18

Junior 4th Year (Upper Junior)

Fall Semester		Spring Semester	
Arch-203 Design V	6	Arch-204 Design VI	6
Arch-951 Construction Documents	3	Arch-701 Public Issues & Arch.	3
Arch Professional Elective	3	Arch Professional Elective	3
Arch Professional Elective	3	Arch Professional Elective	2
General /Liberal Studies	2	General /Liberal Studies	3
Total	17	Total	17

Senior 5th Year

Fall Semester		Spring Semester	
Arch-205 Design VII	6	Arch-206 Design VIII (Thesis)	6
Arch-891 Thesis Preparation	3	Arch-751 Professional Practice	3
Arch Professional Elective	3	Arch Professional Elective	3
Arch Professional Elective	3	General /Liberal Studies	3
General /Liberal Studies	3		
Total	18	Total	15

COURSE DESCRIPTIONS

ARCH – 003 Environment and Architecture (3 crs.)

This lecture course examines the interrelationship between the natural and built environments. Within this framework, students are introduced to natural, cultural, psychological, technological, economic and formal factors that have shaped buildings and human settlements across space and time. The course explores the ecological impact of the human settlement; addresses current environmental issues, and acquaints students with concepts of sustainable architecture and development. *The course is open to the university community.*

ARCH – 011 Elements of Architecture (3 crs.)

Examines the elements of architecture as grouped into two major categories: (1) elements which originate from the needs of man and which are resolved in design, and (2) those elements which originate in nature and which are resolved in construction and technology. Prereqs: ARCH-003, ARCH-150.

ARCH-015 Language of Criticism of Art and Architecture (Elective) (3 crs.)

Introduces the student to the modes of criticism in art and architecture and focuses on the roles language and text play in our understanding of the entities and representations in art and architecture. Also provides an understanding of the new relationships between text commentary, language-criticism and the evolving discursive methods which linguistics has released into modern criticism. Prereqs: ARCH-302, 303.

ARCH-150 Design Communications I (3 crs.)

A studio course that introduces students to architectural representation. Orthographic projections, descriptive geometry, contours, paraline drawings, shade and shadows and model making are presented and applied.

ARCH-151 Design Communication II (3crs.)

This course develops the techniques introduced in Graphics I and introduces freehand/estimated perspective, presentation composition and basic rendering techniques. Prereq: ARCH-150.

ARCH-199 Design I (6 crs.)

This first course of the eight-semester design sequence develops principles of architecture in a studio setting. Projects explore notions of space definition, landscape intensification and transformation, space organization and elementary construction technologies. Prereqs: ARCH-003, ARCH-011 and ARCH-151.

ARCH-200 Design II (6 crs.)

Continuation of Design I. The level of complexity of the projects is increased. Issues of intention and image are introduced. Natural, suburban and urban sites are used to broaden student awareness of the environment. Ordering principles are related to function and to site conditions. Preseqs: ARCH-199.

ARCH-201 Design III (6 crs.)

Reinforces the concepts introduced in Design I and II and explore the impact of function, structure, construction, site conditions and climate on architectural form. Prereq: ARCH-200.

ARCH-202 Design IV (6 crs.)

Continuation of Design III. Explores of the impact of programming function, structure construction site conditions and the environment on architectural form. Prereq: ARCH-201.

ARCH-203 Design V (6 crs.)

Reinforces work of earlier design studios and explores issues of more complex building types and urban design. Prereqs: ARCH-202; ARCH 522; ARCH-502: ARCH-651; ARCH-303.

ARCH-204 Design VI (6 crs.)

Continuation of Design V. Exploration of issues of more complex building types, urban design, and building design comprehensive needs. Prereqs: ARCH-203; ARCH-503; ARCH-951; ARCH-304.

ARCH-205 Design VII (6 crs.)

Builds on work of previous design studios and emphasized exploration and development of architectural expression through integration of various aspects of architectural design within cultural and site contexts. Prereqs: ARCH-204; ARCH-392; ARCH-015;

ARCH-206 Design VIII Terminal Project (Thesis) (6 crs.)

The final design studios and emphasizes exploration and development of architectural expression through integration of various aspects of architectural design within cultural and site contexts. Prereqs: ARCH-204; ARCH-701.

ARCH-219 Contemporary Issues in Architecture (Elective.) (Elective) (3 crs.)

Seminar course which focuses on the work and writing of contemporary "cutting-edge" architects. Prereqs: ARCH-301, -302, 303.

ARCH-301 Architectural History Survey I (3 crs.)

Principles of architectural history, the why and how of the study of history is presented in the context of early civilizations and their architecture. The course covers the beginning of the Arabic work, antiquity, late antiquity and post. Late antiquity persuades of Africa, Europe, Central Asia, Asia and pre-Columbian America. Prereqs: ARCH-003, ARCH-011.

ARCH-302 Architecture History Survey II (3 crs.)

This course provides clear definitions and limits of the elements of architecture as they relate to socio-cultural systems conferring significance and noteworthiness to respective historical styles, from post-renaissance period to the contemporary period. Prereq: ARCH-301.

ARCH-303 History and Theory III (3 crs.)

The beginning of contemporary Western civilization in the Renaissance brings about new concerns. Architectural expression is presented as seen in Europe and America through the end of the 19th Century. To the beginning of the 20th century to the era post modernism, to contemporary. Autonomous developments in the architecture of Africa, Asia, China, Japan and the Americas are examined. Prereq: ARCH-302.

ARCH-305 Principles of Historic Preservation and Documentation (Elective) (3 crs.)

The course will introduce students to the history, theory and practice, design and aesthetics, laws and economics of historic preservation and the process and methods of documentation used to record historic building structures. The process and methods of documentation, research, analysis and graphic presentation utilizing a seminar/demonstration/case study approach is supplemented by seminar/lectures from specialists in the field. **(3 crs.)** Prereq: Arch 301, 302

ARCH-308 Historic Preservation: Documentation (Elective) (3 crs.)

The course introduces students to the practice, design and aesthetics, of historic preservation and the process and methods of documentation used to record historic building structures. Familiarizes students with the methods and means of research, analysis and documentation for the restoration, and/or renovation of a historic structure. Prereqs: Arch 301, 302, 305

ARCH-311 South Asia Architecture and Art, (Elective) (3crs)

This course is an introduction to the art and architecture of the South Asia sub-continent of India, Pakistan and Bangladesh. The course spans the period of its early beginnings to present-day Modern Asia in a holistic cultural passage that is a window to the sociological, economic and religious- Hindu, Muslim, Buddhist- issues, explorations of the climatic and the environmental influences on its art and architecture. Prereqs: Arch 301, 302, 303

ARCH-321 Kahn: Theory of Tectonics, (Elective) (3 crs.)

This course, through class lectures and presentations, emphasizes the tension between the Theory and Practice of Architecture as illustrated in the work of Louis Kahn. Considerable time will be spent analyzing each building by Kahn in terms of structure, materials, geometry, context, budget, sustainability, construction, program, concept, natural light, precedents, and phenomenology To serve as a model for how students can research, understand, apply the exposure and knowledge gained in school to real-world buildings in the future. Prereqs: Arch 301, 302, 303

ARCH-350 Survey Contemporary Architecture & Theory (Elective) (3 crs.)

The primary learning objective in this course is to become familiar with the principle current architectural theoretical ideas, their historical and cultural origins, principle protagonists and representative applications. The intellectual content comes largely from discourses arising from and responding to the so-called "Post Modern Crisis". Prereqs: Arch 301, 302, 303.

ARCH 351 Architecture: Intervention/Instigation

ARCH-360 Modern Architecture: Black Architecture. (Elective) (3 crs.)

An introduction to the contributions of Black architects, the modernist period architecture of black architects in Washington, DC from a historic overview to research, analysis and documentation of the architecture produced by these prominent architects of this period. The work, specifically, The Houses of noted architects, Hilyard Robinson and Howard H Mackey are addressed. Prereqs: Arch 301, 302, 303.

ARCH-401 Materials and Methods I (3 crs.)

Introduces students to the technologies of light construction including wood framing, masonry, and concrete. Properties of these materials are analyzed and the problem associated with their assemblies are studied and graphically illustrated. Prereqs: ARCH-011, ARCH-001, ARCH-151.

ARCH-402 Materials and Methods II (3crs.)

Continues the issues of Materials and Methods I, analogic and issues related to assemblies in building construction and design. Steel and concrete constructions are examined. Prereq: ARCH-401.

ARCH-406 Economic Analysis, (Elective) (3 crs.)

Introduces students to the concepts of the economics of development and the impact of cost on design. Focuses on relevant development issues including: development goals, site acquisition, locations, market demand, zoning and land use regulations, construction financing and investment potential. Prereqs: ARCH-205, ARCH 951.

ARCH-501 Structures I, (Statics) (3 crs.)

Study of force composition, effect, resolution, equilibrium and the strength, mechanical and elastic properties of materials. Prereq: MATH-007.

ARCH-502 Structures II, (Strength) (3crs.)

Elementary analysis and design of structural framing members in wood, steel, and concrete. Prereq: ARCH-501.

ARCH-503 Structures III (Structural Innovations) (3 crs.)

Analysis, design, comparison and selection of framing systems in the context of varied building requirements. Prereqs: ARCH-502.

ARCH-504 Structural Innovations (Elective) (3 crs.)

Innovations in digital media has facilitated the generation of complex, "*potentially-architectural*" ideas with relative ease. To explore these latent ideas as architecture, the study of structures must increase its capacity to engage these expressions. Through the dialogue between idea and structure architectural form is articulated. The course intent is thus, to develop the students understanding of the evolution of historical structural systems, as well as, the progression of innovative structural systems and their impacts and their potential impacts on architectural design. The course also applies a philosophical position regarding the relationship between structural systems and architectural form and space, to ultimately apply progressive thinking to innovative structural systems. Prereqs: Arch 502

ARCH-511 Introduction to Computer Applications in Architecture (3 crs.)

Course introduces architecture students to the computer and its application to architecture. Provides computer literacy for both business and graphic computer applications and systems management. Prereq: None.

ARCH-513 Advanced Computer Applications Lec/Lab, (Elective) (3 crs.)

Course familiarizes students with 3-D modeling and rendering and visual communication and presentation techniques. Students use the system to study mass, proportion, color, and materials to assist them in expressing the intent of their design concepts. Prereq: ARCH-512.

ARCH-515 Imagineering Design for Entertainment, (Elective) (3 crs.)

The course in entertainment design involves the development of both architectural, engineering and storytelling skills to conceptualize, organize, write, and illustrate specifications to construct and create material, for digital and virtual experiences. Students gain experience in industry concepts and technology, to understand and develop special effects and exhibit development for the entertainment field, including, museums, historic sites, and amusement parks. The focus of this course is on the development of a product rather than how to use computer applications and will stress an industry methodology (workflow) for the development of entertainment concept design. Prereq: ARCH-513.

ARCH-521 Introduction to Environmental Systems I (3 crs.)

Exploration of energy issues and conservation, climate, and heat loss and gain as factors in environmental design. Prereqs: MATH-007, PHYS-008, ARCH-200, ARCH-402.

ARCH-522 Introduction to Environmental Systems II (3crs.)

Examination of principles and technologies of life safety stems, vertical transportation systems, electrical supply and distribution systems, lighting, and acoustics and their integration with architectural design. Prereqs: ARCH-0201, ARCH-501, ARCH-520.

ARCH-550 Infrastructure Design & Development, (Elective) (3 crs.)

The intention of this course is to introduce students to the rigors of infrastructure design and development and the merits of interfacing of both gray and green infrastructure design systems and the associated appropriate thinking and vocabulary. To make them aware of the various players and stakeholders, the various layers of information to be processed and mapped, and to then guide them into the development of appropriate reports to convey intent and design recommendations. Prereqs: Arch 522

ARCH-560 Building Types Research, (Elective) (3 crs.)

The course is designed to provide the student the opportunity to identify and address significant issues/concepts in architecture leading to the development of a building topic investigation. **Prereq: 951.**

ARCH-602 Landscape Architecture and Design (Developing Countries), (Elective) (3 crs.) Principles and technologies of site design with emphasis on tropical regions. Prereq: ARCH-201, 202.

ARCH-650 Urban Housing Seminar, (Elective) (3 crs.)

This seminar focuses on practical aspects of the development of publicly financed affordable housing and urban neighborhood development, with a particular emphasis on environmental sustainability. Washington, DC will form the backdrop for the discussion which will regularly include local practitioners who are recognized experts on specific topics. At the end of the semester, each student will have an understanding of the political, financial and social context within which architects and designers must work to realize high quality design. The course starts with the history of urban renewal, the overall structure of city government and then addresses issues specific to individual projects, such as financing, planning/zoning, and environmental concerns. The course ends with a discussion of various redevelopment projects currently being built throughout the District. Prereqs: ARCH-201, 202

ARCH-651 Principles of Urban Design (3 crs.)

To course exposes architecture students to the concepts, methodologies, techniques and attitudes of urban design. To convey an understanding of urban design in the contexts of both the micro and macro scales of the built environment and to sensitize students to the place of architectural interventions in systems of urban design. Prereqs: ARCH-201, ARCH-303, ARCH-001, ARCH-521.

ARCH-652 Urban Design Case Studies, (Elective) (3 crs.)

The main components of Urban Design are the square, the street and the buildings that make up the public face of towns and cities. The subject matter of the course details the meaning and role these elements play in urban design and the ways in which they are arranged and designed. Prereqs: ARCH-651

ARCH-656 Introduction to Community Planning, (Elective) (3 crs.)

Course enables students to gain an understanding of and appreciation for the planning, policies, and programs which shape our communities. Using the case study method, students will be introduced to basic planning skills, research, analysis, critical thinking, strategies for conflicts resolution, program planning, design and development. The course is open to the University community. Prereqs: ARCH-201, 202.

ARCH-660 Urban Housing Case Studies (Elective), (Elective) (3 crs.)

This seminar will introduce students to different urban housing development models within the City of New Orleans with a particular focus on historic preservation. Students will learn the methodology of neighborhood development and preservation while maximizing sustainability through case studies. The course will culminate in a field trip to New Orleans where students will tour case study sites and meet development professionals involved in the important preservation work taking place. The class will be taught by live and remote lecture via Skype. Prereqs: ARCH-201, 202

ARCH-662 Tropical Architecture and Urbanism, (Elective) (3 crs.)

Studies of severe environmental constraints tropical zones place on architectural design and planning development. Emphasis on indigenous design and planning practices and solutions in addition to technologically advanced contemporary approaches and achievements. Prereq: ARCH-202.

ARCH-663 Tropical Architecture and Urbanism (Case Study Seminar), (Elective) (3 crs.) Continuation of ARCH-662 with an emphasis on the analysis of specific building and urban planning case studies. Prereq: ARCH-662.

ARCH-664 Black city: the Other and the City, (Elective) (3 crs.)

This seminar course explores the theoretical projections of the conceptual and ideological constructs of "blackness" related to space and urbanity, to engage in research to expand upon the framework of the black city by exploring the relationship between development of and race in the DC Metropolitan area. The course intent is consistent with the Architecture programs direction of community design and understanding of the urban environment especially of the African American communities. Preseqs: Arch 301, 302, 303.

ARCH-669 Islamic Architecture & Urbanism, (Elective) (3 crs.)

The course is a critical survey of the history and theory of urban development, organization, and architecture of Muslim cities with specified periods of history as well as within given parts of the world. Prereq: ARCH-302

ARCH-701 Public Issues and Architecture (3 crs.)

This course introduces students to key issues and factors linking architects to the public through an examination of historical developments, public policy, and contemporary development initiatives. An emphasis is placed on issues related to the proliferation of suburbia and the resurgence of urban centers in North America. Human settlements and buildings are shaped within processes and systems regulated by government. They are also a reflection of cultural and social values, channeled through the work of design and development professionals. Prereq: ARCH-203

ARCH-751 Professional Practice (3 crs.)

Study of standard practices of the architectural profession, including ethics, contracts, performance criteria and fiscal management. Prereqs: ARCH-205, ARCH-951.

ARCH-752 Business of Architecture, (Elective) (3 crs.)

This course will provide students with a broad understanding of the real estate development industry, real estate finance and the architect's role in a development deal. Students will track an affordable housing deal from beginning to completion, while concurrently learning about issues surrounding site selection, land use and zoning, finance, ownership structure, construction documents, relationships of parties, and sustainability. The course will include an

analysis of project pro forma, the financial relationships of the parties, risk and liability, as well as financing tools. By the end of the course students will have a firm grasp of the anatomy of a real estate project, and understand how to evaluate potential projects using the triple bottom line metric. Prereqs: ARCH-203

ARCH-753 The Anatomy of Black Architectural Practice, (Elective) (3 crs.)

This Introductory survey course focuses on the historical and the current issues, theories and approaches related to the practice of architecture in firms headed by African Americans. The course engages both research and seminar formats to investigate and report on the factors which influence the success (or failure) of the African American in architecture practice. The research and course is consistent with the Department of Architecture's goal of advancing the study of the role of the African American Architect, of Howard University's role as the leading educator of Black architects, and to enhancing the scholarship of the Black Architect and to provide focus on the Howard University architecture program as a leader in the study of the influence of the Black Architect and its practice globally. Prereq: ARCH-200

ARCH 754 Business Intelligence & Entrepreneurship: Architecture/Engineering, (Elective) (3 crs.)

ARCH-755 The (FAB) Collaborative: Freelon, Adjaye, Cook, (Elective) (3 crs.)

This course focuses on various aspects of museum planning and design based upon the new Smithsonian Museum of African American History and Culture (NMAAHC), on the National Mall in Washington DC. Through firsthand insight into the interworkings of this historic-groundbreaking design collaborative, the principals of the FAB team - Phillip Freelon, FAIA, David Adjaye OBE and Peter Cook, AIA- through a series of collective lectures and workshops explore museum planning and design from the early political background leading to the inception of the project and the formation of this dynamic team, the conceptual realization and design to the eventual physical realization of this monumental design from the perspective of these world renown design principals.

Prereqs: ARCH-205, ARCH-951.

ARCH-803 Independent Study, (Elective) (3 crs.)

Independent study in the area of the student's professional interest. (Elective). Prereq: Fourth or fifth-year standing and approval of the faculty and Department Chair. Prereqs: ARCH-204,701

ARCH-807 Site: Design & Principles, (Elective) (3 crs.)

The course covers all aspects of site analysis and design from the graphic tools to the critical components that must be evaluated in the process of determining the proper planning and design of a site. Prereqs: ARCH-151,199

ARCH-809 Explorations in Architecture, (Elective) (2 crs.)

This seminar course focuses on international practice and merging trends in architectural design. Approval of the Department Chair. Prereqs: ARCH-204, 701

ARCH-811 Directed Studies, (Elective) (3 crs.)

Independent study at the advanced level in the area of the student's professional interest. Prereq: Approval of the Department Chair. Prereqs: ARCH-204, 701

ARCH -812 Architecture Study Abroad Seminar: Paris, (Elective) (3 crs.)

ARCH 814 Architecture Study Abroad: Practicum (Elective) (3 crs.)

ARCH-823 New Architecture in Historic Districts, (Elective) (3 crs.)

The course will examine the nature of historic districts, including the criteria for and importance of physical context. Students will be exposed to basic field techniques and skills necessary to interpret accurately the fabric of historic buildings and their settings. The analysis will include the impacts and implications of new design within historic districts. Prereq: Arch 202, 401, 521, 522

ARCH-824 Waterfronts: Des & Sustain, (Elective) (3 crs.)

To introduce students to a range of practical issues involved in the design and management of modern waterfront development, including financing and fiscal arrangements, monitoring of instrumental behavior and use in development of mixed-use urban waterfront communities. The course examines several case studies drawn from around the world. It will highlight sustainability and public interest issues in waterfront development, and deals with the practical planning and design issues which determine how, where and when architecture, urban planning, urban design and urban landscaping confront the realities of water, sustainability, waterfront regeneration, and the new densities and diversification of activities on waterfronts. Prereqs: ARCH-651

ARCH-891 Terminal Project Thesis Preparation, (3 crs.)

Research methods, analysis, and program development for thesis project. Prereq: ARCH-204; and within 36 credits on completion of the curriculum.

ARCH-901 Programming, (3 crs.)

Course focuses primarily on needs of students who are approaching design problems requiring a sequential structuring for analysis, synthesis and evaluation. The course covers micro to macro-environmental programming and design procedures. Considerable emphasis on development and use of appropriate communication skills with case studies. Prereq: 2nd year standing.

ARCH-909 Advanced Delineation, (Elective) (3 crs.)

Study and application of rendering techniques in various media. Prereq: ARCH-151.

ARCH-912 Meaning and Symbolism in Architecture (Elective) (3 crs.)

The course focuses on architecture viewed as systems, signs, and symbols and its processes studied through patterns of information and communication. The pedagogical objective is to accentuate on the differences between hidden dimensional meanings of a simple engineered building and a meaningful work of architecture. Symbolic language in architecture is represented through formal expressions of meanings associated with parts and patterns used in morphology of architecture whether they are parts, patterns, or the whole of any given piece of architecture. Prereq: ARCH-151

ARCH-951 Construction Documents I (3 crs.)

Involves the preparation of technical, professional, and legal documentation for building projects. Prereqs: ARCH-202, ARCH-522, ARCH-502.

ARCH-952 Construction Document II (3 crs.)

(Narrative) Continuation of ARCH-951. Prereq: ARCH-951.

ARCH-961 Construction Management, (Elective) (3 crs.)

The study of project management techniques as they relate to the architect and the construction industry. Prereqs: ARCH-204, ARCH-402, ARCH-503, ARCH-952, ARCH-521.

ARCH-998 Internship, (Elective) (3 crs.)

Students are placed on a part-time basis with practicing firms, municipal and governmental agencies to participate in the actual organizational functions. Prereq: Fourth year standing. Permission of the faculty.