ARCHITECTURE (ARCH)

ARCH1000 SUMMER FAB: THINKING & MAKING
This summer fabrication program bridges and connects thinking of architecture with making architecture. Students experience in a short timeframe all phases of a complete architectural project; from initial design concepts through development and refinement and including realization as a full-scale construction site. By intertwining thinking and making a process of design from beginning to end, we convey understanding, crucial for designers, that making is a form of thinking. Project sites typically will be located in Boston, either campus or community based. Projects, typically conceived as temporary, will generally be small in size, scale or both. They might include, for example, installations (as within a gallery setting), furniture (including near-furniture or furniture-like elements), or site-specific interventions (either outdoors or within existing structures). Prerequisites: High School Summer Program (4 credits) Summer

ARCH1000 STUDIO 01
This foundation studio focuses on techniques of visualization and representation (freehand drawing skills and model making) as they pertain to beginning design. Students develop fundamental design skills through orthographic drawing (plan, section & elevation), perspective drawing, model making and diagramming. (6 credits) fall

ARCH1500 STUDIO 02
This foundation studio studies general concepts of space, form, material and structure by using techniques in architectural representation and visualization, through a series of design problems. Prerequisite: ARCH1000 (6 credits) spring

ARCH2000 STUDIO 03
This studio course explores conceptual design through a series of elemental architectural exercises. Topics pertinent to the student’s concentration are addressed. Prerequisite: ARCH1500 (6 credits) fall

ARCH2100 HISTORY/THEORY 01
This lecture course surveys world architecture, urbanism and landscapes from the ancient world through roughly 1700 CE. Lectures shall discuss architecture as a form of cultural expression and in relation to artistic, political, religious, scientific, technological and social developments. (4 credits) fall

ARCH2200 TECHNOLOGY 01
This lecture and workshop-based course focuses on architectural representation (freehand drawing skills and model making) as they pertain to beginning design. Students develop fundamental design skills through orthographic drawing (plan, section & elevation), perspective drawing, model making and diagramming. (6 credits) fall

ARCH2222 AXP ARCHITECTURE EXPERIENCE PROGRAM
Students entering into the first semester of the junior year are required to register for the Intern Development Program (IDP) of the National Council of Architectural Registration Boards (NCARB) and establish an NCARB file number before the end of the semester. Prerequisite: enrollment in BSA program (0 credits)

ARCH2225 PRO-PRACTICE PREP
Through independent learning, this roughly ten-hour course introduces a systematic approach to architectural contract drawing (CDs), architects’ drawings to communicate design intent clearly. “Picking up redline” marks - refining CDs reiteratively - is a most common assignment for entry-level staff. Materials in this course provide basic vocabulary and technical logic in the organization of a set of drawings that includes: 1) many scales (from the site plan to the detail drawing) and; 2) many disciplines (the building engineering disciplines - structural and MEP design - as well as other such as landscape architecture). Materials provide two different types of resources: readings and quizzes about the contract drawing set, and drawing a project using the software Revit. (0 credits) fall

ARCH2500 STUDIO 04
This studio course explores architectural design through a series of problems increasing in scale, complexity and length throughout the semester. Prerequisites: ARCH2000 and ARCH2200 (6 credits) summer

ARCH2600 HISTORY/THEORY 02
This lecture course surveys world architecture, urbanism and landscapes from 1700 CE to the 1960’s. Lectures discuss architecture as a form of cultural expression and in relation to artistic, political, religious, scientific, technological and social developments. (4 credits) summer

ARCH2700 TECHNOLOGY 02
This lecture and workshop-based course focuses on architectural methods for achieving visual, thermal and acoustical comfort in buildings using climate, form, orientation, materials and structure. Prerequisite: ARCH2200 (4 credits) fall

ARCH3000 STUDIO 05
This studio course explores architectural design through a series of problems increasing in scale, complexity and length throughout the semester. Prerequisite: ARCH2500 (6 credits) fall

ARCH3100 TECHNOLOGY 03
This lecture and workshop-based course focuses on architectural methods for achieving visual, thermal and acoustical comfort in buildings using passive and active systems. Building system technologies are addressed. Prerequisite: ARCH2700 (4 credit) fall

ARCH3100 STRUCTURES 1
This lecture and workshop-based course focuses on architectural methods for achieving visual, thermal and acoustical comfort in buildings using passive and active systems. Building system technologies are addressed. Prerequisite: ARCH2700 (4 credit) fall

ARCH3200 TECHNOLOGY 02
This lecture and workshop-based course focuses on architectural methods for achieving visual, thermal and acoustical comfort in buildings using passive and active systems. Building system technologies are addressed. Prerequisite: ARCH2700 (4 credit) fall

ARCH3400 STRUCTURES 1
This lecture and workshop-based course focuses on architectural methods for achieving visual, thermal and acoustical comfort in buildings using passive and active systems. Building system technologies are addressed. Prerequisite: ARCH2700 (4 credit) fall

ARCH3500 STUDIO 06
This studio course explores architectural design through a series of problems increasing in scale, complexity and length throughout the semester. Prerequisite: ARCH3000, ARCH3200 and ARCH3400; Corequisite: ARCH3000 (3 credits) fall

ARCH3500 STRUCTURES 1
This lecture and workshop-based course focuses on architectural methods for achieving visual, thermal and acoustical comfort in buildings using passive and active systems. Building system technologies are addressed. Prerequisite: ARCH2700 (4 credit) fall

ARCH3600 STRUCTURES 1
This lecture and workshop-based course focuses on architectural methods for achieving visual, thermal and acoustical comfort in buildings using passive and active systems. Building system technologies are addressed. Prerequisite: ARCH2700 (4 credit) fall

ARCH3700 CONCENTRATION STUDIES 01
This course addresses introductory topics to the students’ chosen concentration (Adaptive Interventions, Emerging Technologies, or Urbanism). Contemporary issues in the field are addressed through readings, discussions, analysis, writing and projects. (4 credits) fall

ARCH3750 CONCENTRATION STUDIES 02
This course addresses advanced topics pertinent to the students’ chosen concentration (Adaptive Interventions, Emerging Technologies, or Urbanism). Contemporary issues in the field are addressed through readings, discussion, analysis, writing and projects. (4 credits) fall
ARCH3800 SPECIAL TOPICS IN ARCHITECTURE
Presents topics that are not covered by existing courses and are likely to change from semester to semester. Refer to the Class Schedule for a specific semester for details of offerings for the semester. (4 credits) fall, spring

ARCH3850 SPECIAL TOPICS IN ARCHITECTURE
Presents topics that are not covered by existing courses and are likely to change from semester to semester. Refer to the Class Schedule for a specific semester for details of offerings for the semester. (4 credits) fall, spring

ARCH3900 STRUCTURES II
Students analyze more complex systems and design beams and columns in wood, steel, and concrete. Topics include analysis of continuous beams and rigid frames, loads on structural systems, grids & pattern layout and funicular structures (cables and arches). Prerequisite: ARCH3400 (3 credits) spring

ARCH4000 STUDIO 07 (URBANISM)
This studio course introduces topics of design in the urban realm. Students engage with complex issues and agendas, and develop proposals in response to the physical, cultural, and social contexts that inform design at the urban scale. Topics pertinent to the Urbanism concentration are addressed. Prerequisites: ARCH3500; and Urbanism concentration status (6 credits) fall

ARCH4025 STUDIO 07 (EMERGING TECHNOLOGY)
This studio course introduces topics of design in the urban realm. Students engage with complex issues and agendas, and develop proposals in response to the physical, cultural, and social contexts that inform design at the urban scale. Topics pertinent to the Emerging Technologies concentration are addressed. Prerequisites: ARCH3500; junior status in B.S.Arch, and Emerging Technologies concentration status (6 credits) fall

ARCH4050 STUDIO 07 (ADAPTIVE INTERVENTIONS)
This studio course introduces topics of design in the urban realm. Students engage with complex issues and agendas, and develop proposals in response to the physical, cultural, and social contexts that inform design at the urban scale. Topics pertinent to the Adaptive Interventions concentration are addressed. Prerequisites: ARCH3500; junior status in B.S.Arch, and Adaptive Interventions concentration status (6 credits) fall

ARCH5500 STUDIO 08
This studio course proposes design topics grounded in a research agenda that informs the design process. The range and scale of projects vary; students initiate a single original design project. Prerequisites: ARCH4000 or ARCH4025 or ARCH4050 (6 credits) Spring

ARCH7000 GRADUATE FOUNDATION STUDIO 01
This studio addresses graduate level design topics dedicated to students in the two year Master of Architecture program. Prerequisite: Enrollment in two year Master of Architecture program; Please refer to the Design Studio Grade Requirement regarding the final grade for this course (6 credits) fall

ARCH7250 GRADUATE HISTORY THEORY LECTURE
This lecture course surveys world architecture, urbanism and landscapes from the ancient world through roughly 1600 CE. Lectures shall discuss architecture as a form of cultural expression and be presented in relation to artistic, political, religious, scientific, technological, and social developments. (4 credits) fall

ARCH7300 TECHNOLOGY I
This lecture and workshop-based course focuses on site design skills and concepts, in urban and non-urban environments. The course also includes principles of building siting/orientation and an introduction to passive environmental building strategies. (4 credits) fall

ARCH7350 2D + 3D MEDIA & PROCESSES
Requirement for incoming 3 year graduate students. The course introduces and applies fundamental manual drawing techniques and logics essential to the development of spatial and critical thinking skill sets and practice as well as digital 2D and 3D translations. (4 credits) fall

ARCH7500 GRADUATE FOUNDATIONS STUDIO 02
This studio focuses on techniques of visualization and representation (freehand drawing skills and model-making) as they pertain to beginning design. Students continue to develop fundamental design skills through orthographic drawing (plan, section and elevation), perspective drawing, model-making and diagramming. Fundamental digital skills are explored. General concepts of space, form, material and structure are investigated by using techniques in architectural representation and visualization in a series of design problems. Prerequisite: ARCH7000 (6 credits) spring

ARCH7550 GRADUATE HISTORY THEORY SEMINAR
This seminar builds on core themes and topics introduced in the Graduate History Theory Lecture, surveying world architecture, urbanism and landscapes from roughly 1600 CE to present. Graduate students concentrate on focused research and themes, critical writing and research at the graduate level is emphasized. Required for three year graduate students. Prerequisite: ARCH7250; for two year students: previous relevant history theory course work

ARCH7600 TECHNOLOGY 02
Technology 02 introduces the theory and application of climate, energy use and comfort as determinants of architectural form. Emphasis is on architectural methods for climate adaption using non-mechanical means (climate, shape, orientation, material and structure) for ventilating, cooling, heating and lighting envelope-load dominated buildings. (4 credits) spring

ARCH8000 ADVANCED GRADUATE DESIGN STUDIO 01
This design course focuses on the development of highly detailed design proposals, integrating knowledge of building materials and systems within the framework of well-articulated and advanced design intentions. Prerequisites: ARCH7000 and ARCH7300 (6 credits) fall

ARCH8250 ADVANCED TECHNOLOGY & MATERIALS
This lecture and workshop-based course focuses on site and architecture design skills and concepts, in urban and non-urban environments. The course also includes principles of building siting/orientation and an introduction to passive environmental building strategies. Emphasis on materials, formal logics and structural relationships at multiple scales will be investigated. (4 credits) spring

ARCH8300 APPLIED RESEARCH & DESIGN 01
Focus on advanced studies Research & Design methodologies through a series of explorative projects & presentations. Methodologies & Strategies are explored so as to instill a clear understanding of advanced research at the graduate level. (4 credits) fall

ARCH8400 STRUCTURES I
Students learn how loads are applied and distributed, and how to analyze beams and trusses. Both the method of joints and the method of sections will be used. Basic principles of strength of materials, structural mechanics and structural analysis are presented. Prerequisite: M.Arch status (3 credits) fall
ARCH8500 ADVANCED GRADUATE DESIGN STUDIO 02
This design course focuses on the development of highly detailed design proposals, integrating knowledge of building materials and systems within the framework of well-articulated and advanced design intentions. **Prerequisite:** ARCH8000 (6 credits) spring

ARCH8650 FABRICATION METHODS
With a focus on making as a means of applied research, graduate students work with both manual + digital fabrication tools, techniques and fabrication methodologies. Design and Applied Research will range in scale and scope from the making of artifacts to prototyping to one to one scale manufacturing. **(4 credits)** spring

ARCH8700 APPLIED RESEARCH & DESIGN 02
Applied Research & Design 02 focuses on visual methodologies through a series of explorative projects & presentations. Visual research methodologies & strategies are introduced through a series of case studies and precedents. Graduate level criteria & expectation are to be met. **Prerequisite:** ARCH8300 (4 credits) spring

ARCH8750 CONCENTRATION STUDIES
Concentration Studies offers topics pertinent to Urbanism, Emerging Technologies or Adaptive Interventions with an emphasis on relevant models of research within the selected discipline of the concentration. Contemporary issues in the field are addressed through readings, discussions, analysis, writing and projects. **Prerequisite:** ARCH7000 (4 credits) fall; spring

ARCH8800 STRUCTURES 02
Introduction to behavior and analysis of more complex systems and design of beams and columns in wood, steel and concrete. Topics include analysis of continuous beams/rigid frames, loads on structural systems, grids/pattern layout and funicular structures (cables and arches). **Prerequisite:** ARCH8400 (3 credits) spring

ARCH9000 STUDIO 09: SPECIAL TOPICS
This studio addresses design topics relevant to graduate level study. Students integrate the major architectural issues emphasized in the previous studios in a single design project. **Prerequisite:** M.Arch status; **Corequisite:** ARCH9200 and ARCH9300 (6 credits) fall

ARCH9200 THESIS PREPARATION 01
This course examines the theoretical underpinnings and methodologies pertinent to research in architecture. Students come to understand how researchers conduct architectural research, with the goal of preparing their own thesis agendas. **Prerequisite:** M.Arch Status; **Corequisite:** ARCH9300 (4 credits) fall

ARCH9300 THESIS PREPARATION 02
Students prepare the groundwork for their thesis project through research and development of an architectural program, site analysis, and design methods that support an original design project in ARCH9500. **Prerequisite:** M.Arch status; **Corequisite:** ARCH9200 (4 credits) fall

ARCH9500 THESIS STUDIO
Students pursue a final thesis design of a project of their own definition, as developed during the fall semester in ARCH9200 and ARCH9300. **Prerequisite:** ARCH9200 & ARCH9300 (6 credits) spring

ARCH9600 PROFESSIONAL PERSPECTIVES
A comprehensive study of architectural practice, including project management, financial planning, organizational structure, scheduling, marketing, legal issues, and the roles and responsibilities of design professionals. **Prerequisite:** M.Arch status (4 credits)