

Department of Architecture and Design

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Architecture

Mission Statement

The Bachelor of Architecture program offers students a first professional degree that qualifies them to practice architecture. The program aims to graduate well-rounded intellectuals, critical thinkers and skilled professional architects who are committed to the advancement of the field and practice and who have a sense of responsibility for the built environment and natural resources. Design is approached as a research-oriented process that is culturally grounded, theoretically informed and technically advanced so as to enable graduates to become lifelong learners and take a leading role in professional practice both in Lebanon and the region.

Program Description

The Architecture program comprises a total of 174 credit hours normally taken over five years. The curriculum is structured as follows: 1) Two foundation years, first and second, with core requirements in design, technical and history courses that offer students basic skills and knowledge in design and related areas. 2) Two advanced years, third and fourth, with core requirements in advanced design, technical, history and theory courses, reinforced by the distribution electives. Two of the design studios at this level are thematic vertical studios. 3) Final year, fifth year, with a two-semester design thesis and project and advanced electives. In order to pass a year, students must obtain a minimum average of 70 in both design courses offered in any given year. If the average is below 70, the student must repeat the design studio(s) in which s/he received a grade below 70.

The degree requirements in Architecture consist of the following:

- 117 credit hours of mandatory core courses
- 24 credit hours of approved ArD/MSFEA field electives distributed as follows:
 - 3 credit hours in Category A: Representation
 - 3 credit hours in Category B: History and Theory
 - 3 credit hours in Category C: Technology and Professional Practice
 - 15 credit hours in any of categories A, B or C
- 9 credit hours of free electives in consultation with the academic advisor

To meet the General Education requirements of AUB (24 credits must be taken outside the department), students must take:

- 6 credit hours of English: ENGL 203 and ENGL 206
- 3 credit hours in Arabic Communication Skills
- 12 credit hours of approved electives in humanities, including ARCH 121 and 122
- 6 credit hours of approved electives in social sciences, including ARCH 332
- 6 credit hours of approved electives in natural sciences, including ARCH 151
- 3 credit hours of an approved elective in quantitative thought

Curriculum for the Degree of Bachelor of Architecture

First Year

Fall term		Credits
ARCH 100	Basic Design	6
ARCH 111	Drawing I	3
ARCH 121	History of Art and Architecture I	3
FEAA 200	Introduction to Engineering and Architecture	3
ENGL 203	Academic English	3
		Total 18
Spring term		Credits
ARCH 101	Architecture Design I	6
ARCH 112	Drawing II	3
ARCH 122	History of Art and Architecture II	3
ARCH 151	Statics and Mechanics of Solids	3
		Total 15

Second Year

Summer term		Credits
ARCH 241	Surveying Regional Architecture 2D-3D	9
Fall term		Credits
ARCH 202	Architecture Design II	6
ARCH 223	History of Art and Architecture III	3
ARCH 252	Structural Systems	3
ARCH 242	Building Construction I	3
1 General Education Requirement		3
		Total 18
Spring term		Credits
ARCH 203	Architecture Design III	6
ARCH 231	Contemporary Architecture	3
ARCH 243	Building Construction II	3
1 General Education Requirement		3
		Total 15

Third Year

Summer term		Credits
3 General Education Requirements		9

Fall term		Credits
ARCH 304	Architecture Design IV	6
ARCH 344	Environment I - Climate Responsive	3
ARCH 313	Digital Tools	3
1 Field or Free Elective		3
		Total 15

Spring term		Credits
ARCH 305	Vertical Studio I	6
ARCH 353	Environment II - Building Systems	3
ARCH 432	Urbanism	3
1 General Education Requirement		3
		Total 15

Fourth Year

Summer term		Credits
ARCH 471	Training in Construction Drawings	1 b

Fall term		Credits
ARCH 406	Architecture Design V	6
2 Field or Free Electives		6
1 General Education Requirement		3
		Total 15

Spring term		Credits
ARCH 407	Vertical Studio II	6
ARCH 461	Professional Practice	3
2 Field or Free Electives		6
		Total 15

Fifth Year

Summer term		Credits
ARCH 572	Professional Training	1 b*
Fall term		Credits
ARCH 508	Design Thesis I	6
3 Field or Free Electives		9
		Total 15
Spring term		Credits
ARCH 509	Design Thesis II	6
3 Field or Free Electives		9
		Total 15

Course Descriptions

Mandatory Core Courses

Each of the following courses is required for the degree in Architecture. Students should pay careful attention to the prerequisite structure, which must be observed. There is a grade average requirement for ARCH 100/101, 202/203, 304/305, 406/407 and 508/509. In order to pass a year, students must obtain a minimum average of 70 in both design courses offered in any given year. If the average is below 70, the student must repeat the design studio(s) in which s/he received a grade below 70. Non-majors must secure the approval of the department and the instructor concerned to enroll in any of the courses listed below.

FEAA 200 Introduction to Engineering and Architecture 3 cr.
 The course is designed to familiarize first year students with the different disciplines in Engineering and Architecture, including: Architecture, Civil, Mechanical, Electrical, Chemical, Industrial and technologies used in the fields. The course takes a unique interdisciplinary approach to the field and introduces the related disciplines in the world of engineering and architecture. One key objective is to promote interdisciplinary interaction and innovative thinking. The course is organized into modules covering the different disciplines within the Maroun Semaan Faculty of Engineering and Architecture (MSFEA). The last module of the class showcases interdisciplinary projects demonstrating interactions among the different fields. The lectures explain as applicable to each discipline, through examples, notions of problem solving, design thinking, process of invention and innovation, environmental and civic responsibility, and measures of success in aesthetics and performance. The course project is a key component of the course. It is interdisciplinary in nature bringing ideas and solutions from all disciplines in engineering and architecture. *Annually.*

ARCH 100 Basic Design 6 cr.
 The studio introduces students to the field of design and its fundamental principles. It is required for all first year students in Architecture and Graphic Design. The aim of the course is to expose students to basic design principles and train them in design studio skills, including 2D drawing and model-making.

ARCH 151 Statics and Mechanics of Solids 3 cr.
 The course covers basic physics principles and structural analysis, the strength of materials and their structural properties. It combines lectures and lab work, and imparts a basic understanding of how structural elements of a building work and how they can be manipulated.

ARCH 202 Architecture Design II 6 cr.
Materials and Structures in the Natural Environment

The studio focuses on materials and structures in the natural environment. It is taught concurrently with technical courses: Structural Systems and Building Construction I. Through lectures, analyses of precedents, material case studies and different exercises, students investigate structural systems, materials and construction methods, exploring their formal, spatial and aesthetic possibilities and environmental characteristics. Students apply their explorations to integrate structures in a natural environment. Through site visits and studio exercises, students are introduced to site analysis and landscape basics, and begin to address environmental conditions as they relate to climate, topography and vegetation. The course aims at clarifying the dialectic relationship of material, structure, architectural form and site. *Prerequisites: ARCH 101, ARCH 241 and a combined grade average of 70 in ARCH 100 and ARCH 101.*

ARCH 203 Architecture Design III 6 cr.
Public Architecture in an Urban Context

Building on the previous design courses, Architecture Design III addresses public building structures in urban environments. Through exercises, site visits, lectures and discussions, students are introduced to different themes and methods in understanding architecture in the urban realm. They look at urban areas with reference to historical, cultural and socioeconomic factors. Mapping and abstraction are key tools for design inquiries. Students are asked to develop and integrate program and architectural design in the urban context, with reference to quantitative data on the ground, such as density, traffic, etc. as well as qualitative data such as culture, habits, behavior, etc. Through various exercises they learn about the urban context at different scales ranging from small urban installations to medium-scale buildings with hybrid programs; they also address accessibility, and pedestrian and vehicular circulation. The course balances analytical skills with design interventions. *Prerequisite: ARCH 202.*

ARCH 223 History of Art and Architecture III 3 cr.

The last course of the History of Art and Architecture sequence surveys the development of Western art and architecture from 1830 to 1945. Thinking beyond the established canon, the course critically addresses the political, aesthetic, institutional and cultural forces that have contributed to shaping this canon. Problems we encounter when we acknowledge that art is a cultural product include the uneasy fit of style-period categories or the isms of art, gender, historical definitions of the avant-garde, the consumption and display of art, and the status of the artist in society. *Prerequisites: ARCH 121, ARCH 122 or consent of instructor.*

ARCH 231 Contemporary Architecture 3 cr.

The Contemporary Architecture course investigates theory and practice in architecture and urbanism from late Modernism to contemporary times. As a logical continuation of History of Modern Art and Architecture: 1760-1945, the course begins with an overview of major post-World War II architects and architectural movements representing Late Modernism or challenges to the Modern Movement. Rather being a historical and descriptive survey of movements, trends or isms, the course then adopts a thematic and analytical approach to developments from late modernism to contemporary practice. It

focuses on philosophies, theories and themes underlying contemporary architectural writings and built works and addressing issues of globalization; place and cultural identity; relationship to history and heritage; relationship to nature and landscape; environmental, social and economic sustainability; use of technology; materials and light; and spatial and formal explorations. *Prerequisite: ARCH 223.*

ARCH 241 Surveying Regional Architecture 2D-3D 9 cr.

In this fieldwork course students study and document the traditional and transitional architecture of a given region. On the macro level, the region of interest expands to the Eastern Mediterranean Sea Basin and the Middle East. On a micro level, it covers the sub-regional variations within Lebanon in terms of traditional, transitional and contemporary architecture. The scope of study encompasses different scales of rural and urban settlements. Case studies are generally structured around the investigation of building types, regional variations in architecture, and the study of historical buildings and neighborhoods. *Prerequisites: ARCH 112 and ARCH 101.*

ARCH 242 Building Construction I 3 cr.

This is the first in a sequence of two courses on building construction materials and methods. Having studied the structural systems and properties of various building materials in the Structures courses, in this course students focus on materials properties, methods of construction, assembly systems, and environmental performance and impact of masonry, concrete (cast-in-place and precast systems), steel and wood (different types). Availability and use of regional materials, material extraction, fabrication, erection, craftsmanship and jointing of different materials are addressed. The course also introduces construction sequence, site works, excavations and foundation systems.

In addition to including an introduction to detailing the main constituents of the buildings envelope, the course allows students to get hands-on experience by building scale models of masonry walls, wood frames and steel joints.

ARCH 243 Building Construction II 3 cr.

The second building construction course focuses on building enclosure and finish construction as well as on construction drawings. In the first section, basic principles and components of the building envelope are studied with their environmental performance. Topics include damp-proofing and waterproofing, thermal insulation, exterior wall systems and materials, exterior windows and doors, glazing systems, solar control and shading devices, and roofing systems. Students learn to design and detail building envelopes that provide protection from water, wind and temperature extremes and to optimize solar control. A wide range of exterior wall systems is explored. The second section of the course covers finish construction; including interior partitions, floor, stairs, wall finishes and suspended ceilings. Materials embodied energy, environmental impact and reuse are also investigated, and selection of “green” materials is discussed. In the third section, students develop the working drawing plans, elevations, sections and details of a small house. *Prerequisite: ARCH 242.*

ARCH 252 Structural Systems 3 cr.

In this second Structures course, students acquire a deeper knowledge of structural systems as they relate to architectural design. The course explores synergies of form, structures and materials with an emphasis on aesthetics and efficiency. Lectures are combined with lab work to develop an understanding of structures as integral to the creative design process. The course enables students to develop structural design

ARCH 344 Environment I – Climate Responsive Design 3 cr.

The course addresses sustainability and climate-responsive architecture and site planning. After a brief overview of energy issues as they relate to architecture and urbanism, the course examines the interaction between climate, people and buildings, and presents basic principles of passive design and sustainable site planning. An introduction to climatic parameters and thermal comfort is followed by a study of the elements of sun, wind and daylight as they pertain to passive design, focusing on building form and solar radiation, natural ventilation strategies and daylighting design principles and applications. The course also briefly addresses other sustainable design strategies and includes an overview of active systems (solar, photovoltaic panels, geothermal), water reduction and reuse, green materials and acoustics.

ARCH 353 Environment II – Building Systems 3 cr.

This course is the second environmental systems course. It provides a design-oriented study of environmental control, life safety and building service systems; consisting of electrical, lighting, heating, ventilation, air-conditioning, water and waste, acoustics, fire safety and fire protection, and vertical transportation. The course covers basic principles, applications and performance of environmental control systems, and addresses these systems as they impact building planning and design, and occupant health and comfort. Sustainable design strategies, energy efficiency, optimization of indoor environmental quality and economic soundness are key issues. *Prerequisite: ARCH 344.*

ARCH 461 Professional Practice 3 cr.

This is the first of two courses that expose students to the scope and key aspects of design professional practice. In the first part of the course, students investigate the establishment and management of a design-focused practice with emphasis on financial planning, navigating legal and regulatory requirements, marketing strategies and team building, and ethics and professional conduct. Types of practice and professional options after graduation in the national, regional and international realms, as well as prospects for post-graduate education and specialization are also discussed.

**ARCH 406 Architecture Design V
Comprehensive Design Studio 6 cr.**

In this comprehensive design studio, students apply the knowledge and skills acquired in all previous design studios, theory and technical courses. Projects assigned are medium to large-scale buildings, and themes can relate to culture, education, tourism, work, retail and transportation. Projects envisioned are complex building structures with preferably hybrid functions addressing the public domain, circulation, accessibility, life safety, parking, building codes and zoning regulations. *Prerequisites: ARCH 305 and a combined grade average of 70 in ARCH 304 and ARCH 305.*

ARCH 407 Vertical Design Studio II 6 cr.

See description of ARCH 305. *Prerequisite: ARCH 406.*

ARCH 471 Training in Construction Drawings 0 b.

This is a non-credit course that consists of professional training in architectural offices where students develop their knowledge of execution drawings.

ARCH 508 Design Thesis I**6 cr.**

In this course, students start a year-long design investigation of an architecture issue of their choice and develop a related design thesis. The design investigation must be of a professional caliber that entitles students to graduate and join professional practice as licensed architects. It is also an opportunity to pursue a comprehensive architectural design process that integrates design research, theoretical paradigms, representational methods, regulatory systems and technical knowledge. *Prerequisite: ARCH 407.*

ARCH 509 Design Thesis II**6 cr.**

Design Thesis is the culmination of undergraduate education in Architecture. This course is the second part of a year-long thesis project. It consists of an architectural design intervention derived and developed from the issues raised and researched in Design Thesis I. Students work independently in a studio setting. *Prerequisite: ARCH 508.*

ARCH 572 Professional Training**1b.**

This is an eight-week professional training course at a recognized architectural design office in Lebanon or abroad. Students are expected to engage in a capacity that ensures they apply their knowledge and acquire professional experience in the field of architecture. *For Architecture and Graphic Design elective courses see list at end of Graphic Design section.*

Minor in Urban Studies

The minor in Urban Studies is open to all AUB students who are interested in expanding their knowledge of the contemporary opportunities and challenges posed by the ongoing transformations of the natural and built environments as the world shifts to a “planetary” urbanization. Through the minor, students familiarize themselves with a range of contemporary debates discussing the implications of urbanization across disciplinary fields. They also strengthen their command over some of the methods and tools used in social and environmental sciences, humanities, and urban planning and design to analyze urbanization processes.

In order to satisfy the requirements of a minor in urban studies, a student must earn 15 credits of coursework, as described below.

As per AUB regulations, (1) at least 9 credit hours of coursework must be completed at AUB, (2) at least 6 credits should not be taken to satisfy another minor, (3) none of the courses can be a P/F course, and (4) students must complete at least 60 credits at the sophomore level or higher, attain an average of 70 or more in courses taken to satisfy the requirements of the minor, and maintain a cumulative average above 70 to be eligible to apply for the minor.

Students enrolled in Architecture, Engineering or Landscape Architecture who hold a minor in urban studies qualify for an advanced standing if they apply for the Master of Urban Planning and Policy (open to all students with a first degree in engineering, architecture, landscape, and/or the social sciences) and the Master of Urban Design (open to all students with a first professional degree in architecture and/or landscape architecture).

The minor in urban studies is administered by the Coordinator of the Master in Urban Planning and Policy & Master in Urban Design programs.

Course Requirements

In order to obtain a minor in urban studies, students must complete fifteen credits distributed as follows:

- Two courses in the general theory/methods framework are required:

ARCH 332/ Urbanism (3cr.)
URPL 632

URPL 630/ Research Methods (3cr.)
SOAN 210

- At least one course about the interaction of urban studies with a professional field is required:

Design & Landscape

URDS 632 From Urban Design to Landscape Urbanism

LDEM 301 Urban Greening

LDEM 302 Green Infrastructure for Resilient Landscapes and Cities

Urban Planning

URPL 631 Introduction to Planning Theory and Policy

Environmental Studies and Management

CIVE 656 Environmental Impact Assessment

CIVE 601 GIS and Geospatial Data Modeling

Urban Transportation and Infrastructure

CIVE 661 Urban Transportation Planning I

CIVE 666 Public Transportation

- At least one of the special-topics theory courses (3 credits) that intersect directly with the study of the city in the Department of Architecture and Design:

URPL 621 Urban Form and its Formation

URPL 637/
ARCH 036 Illegal Cities

URPL 664 Urban Land Use Planning

URPL 665/
ARCH 065 Development and Planning Policies

URPL 669 Building and Planning Codes

URDS 624 Hybrid Beirut: Morphogenesis of the Contemporary City

URDS 632 From Urban Design to Landscape Urbanism

URDS 634 The Contested Urban Heritage of Cities in the Arab World

ARCH 015 Micro Devices/Infrastructures

- One of the following courses (3 credits) may also be taken towards the minor in urban studies:

HIST 263 Islamic Cities, 600-1500

CVSP 205 Ancient, Medieval, Islamic, and Renaissance Civilizations

SOAN 220 City and Society

SOAN 216	Hands-On Anthropology
SOAN 221	Political Anthropology
SOAN 223	Social Inequality: Conflict and Consensus
FINA 232	Real Estate Management
FINA 234	Real Estate Finance and Investment

Register for the 0-credit seminar City Debates once (URPL 660).

Graphic Design

Mission Statement

The undergraduate program in graphic design offers a professional degree with a well-rounded scope covering the multiple practice areas of the discipline. The curriculum focuses on solid training in the theoretical, practical and technical aspects of graphic design, while promoting a socially responsible practice and awareness of both local and international developments in the field. The goal of the program is to produce graduates with expert design proficiencies, grounded in historical knowledge, who are capable of adapting graphic and visual tools to the changing demands of the design industry. Students develop intellectual and critical thinking skills and contribute to aesthetic and technological innovations by generating ideas in response to a wide range of design challenges. The program is committed to the role design plays in the multicultural and multilingual contemporary regional context, and provides a creative teaching and learning environment to address these issues.

Program Description

The Graphic Design Program is comprised of a total of 139 credit hours normally taken over four years. The curriculum is structured as follows: 1) Two foundation years, first and second, with core requirements in design, typography, representation techniques, digital media and history courses, which offer students basic skills and knowledge in design and related areas. 2) One advanced year, third year, with core requirements in advanced design, digital media and theory courses, reinforced by the field electives and General Education requirements. 3) Final year, fourth year, with a one-year design project and advanced electives. In order to pass a year, students must obtain a minimum average of 70 in both design courses offered in any given year. If the average is below 70, the student must repeat the design studio(s) in which s/he received a grade below 70.

The degree requirements in Graphic Design consist of the following:

- 97 credit hours of mandatory core courses
- 15 credit hours of approved ArD/MSFEA field electives:
 - 3 credit hours in Category A: Representation
 - 3 credit hours in Category B: History, Theory and Methodology
 - 3 credit hours in Category C: Digital Media, Typography and Professional Practice
 - 6 credit hours: choice between A, B & C

To meet the AUB General Education requirements (27 credits must be taken outside the department):

- 6 credit hours of English: English 203 and English 204
- 3 credit hours in Arabic Communication Skills
- 12 credit hours of approved electives in humanities, including ARCH 121 and ARCH 122
- 6 credit hours of approved electives in social sciences, including GRDS 331
- 6 credit hours of approved electives in natural sciences
- 3 credit hours of an approved elective in quantitative thought: CMPS 207

Curriculum for the Degree of Bachelor of Fine Arts in Graphic Design

First Year

Fall term		Credits
ARCH 100	Basic Design	6
GRDS 111	Drawing	3
ARCH 121	History of Art and Architecture I	3
ENGL 203	Academic English	3
1 General Education Requirement		3
		Total 18
Spring term		Credits
GRDS 101	Graphic Design I	6
ARCH 122	History of Art and Architecture II	3
GRDS 151	Typography I	3
GRDS 141	Computer Graphics	3
1 General Education Requirement		3
		Total 18

Second Year

Summer term		Credits
GRDS 212	Photography	3
2 General Education Requirements		6
		Total 9
Fall term		Credits
GRDS 202	Graphic Design II	6
ARCH 223	History of Art and Architecture III	3
GRDS 252	Typography II	3
GRDS 213	Illustration	3
		Total 15
Spring term		Credits
GRDS 203	Graphic Design III	6
GRDS 224	History of Graphic Design	3
GRDS 242	Motion Graphics	3
GRDS 214	Printmaking	3
		Total 15

Third Year

Summer term		Credits
2 General Education Requirements		6
1 General Education Course: CMPS 207		3
		Total 9
Fall term		Credits
GRDS 304	Graphic Design IV	6
GRDS 331	Introduction to Visual Theory	3
GRDS 361	Professional Practice	3
GRDS 343	Interaction Design I	3
		Total 15
Spring term		Credits
GRDS 305	Graphic Design V	6
GRDS 344	Interaction Design II	3
GRDS 332	Research Methods	3
1 Field Elective		3
		Total 15

Fourth Year

Summer term		Credit
GRDS 462	Approved Experience	1 b ^{1*}
Fall term		Credits
GRDS 406	Final Project Research	4
2 Field Electives		6
1 General Education Requirement		3
		Total 13
Spring term		Credits
GRDS 407	Final Project Design Research	6
2 Field Electives		6
		Total 12

Course Descriptions

Mandatory Core Courses

ARCH 100 **Basic Design** **6 cr.**
See Architecture section.

ARCH 121 **History of Art and Architecture I** **3 cr.**
See Architecture section.

ARCH122 **History of Art and Architecture II** **3 cr.**
See Architecture section.

GRDS 101 **Graphic Design I** **6 cr.**
 This is an introductory studio on graphic design methods and processes where fundamentals of visual communication are addressed. The studio starts with basic investigations in form making, and gradually moves on to cover more complex components of graphic design dealing with the construction of meaningful visual messages and the organization of information as well as the dynamic interaction of color and its applications. *Prerequisite: ARCH 100.*

GRDS 111 **Drawing** **3 cr.**
 This studio course is an introduction to visual representation. Students learn drawing skills and pictorial conventions, and consider the historical specificity and contemporary relevance of such skills and conventions.

GRDS 141 **Computer Graphics** **3 cr.**
 This course introduces students to digital imaging techniques through computer software learning. Students are introduced to the Mac Operating System platform and move on to cover basics of industry standard software from vector-based programs (such as Adobe Illustrator) to pixel based image creation and manipulation (such as Adobe Photoshop), while addressing desktop publishing design programs (such as In-Design).

GRDS 202 Graphic Design II 6 cr.
 This studio focuses on principles of identity design through investigations in symbolic graphic representation, logo design, and the development of identity systems using various modes of image making and typography. *Prerequisites: GRDS 101 and a combined grade average of 70 in ARCH 100 and GRDS 101.*

GRDS 203 Graphic Design III 6 cr.
 This studio addresses graphic design as a cultural practice. It focuses on processes of visual communication where issues of meaning production and exchange are emphasized and critically examined in their relation to particular social contexts and localities. Methodologies of arriving at meaningful graphic solutions—image-type relationships, visual narratives, info-graphics and complex information organization—are explored through diverse theme-based projects and loose-sheet printed formats of public dissemination (posters, book covers, leaflets, maps). *Prerequisite: GRDS 202.*

GRDS 212 Photography 3 cr.
 A course aimed at providing graphic design students with a thorough understanding of the basic techniques and aesthetics of both black and white and color photography through hands-on assignments and darkroom practice.

GRDS 213 Illustration 3 cr.
 This course introduces students to illustration techniques and styles with the aim of strengthening their representation and visualizing skills to enrich the graphic design process and its outcomes. Assignments cover various themes while exploring a wide range of media and approaches. *Prerequisites: GRDS 111 and GRDS 112.*

GRDS 214 Printmaking 3 cr.
 Basic printmaking covers traditional printmaking techniques such as lithography, etching, silkscreen and woodcut. Students acquire a foundation and understanding of print/printmaking techniques and processes through project based exercises creating unique impressions on various surfaces.

ARCH 223 History of Art and Architecture III 3 cr.
See Architecture section.

GRDS 224 History of Graphic Design 3 cr.
 Starting with Gutenberg's 42-line bible as the first specimen of movable type printing, the course will cover a period of time from the 15th century till today. The course is conceived of thematically with the intention to address the conceptualization of Graphic Design as a discipline directed by various interpretative inquiries into the History and Theory of graphic communication. The course is formulated in a way that enables students to take part in the current debate around graphic design theory and practice. *Prerequisite: ARCH 223.*

GRDS 151 Typography I 3 cr.
 The course introduces students to Arabic and Latin type and typography, providing the necessary historical, theoretical and technical knowledge, in combination with applied exercises and projects that aim to enrich the graphic designer's typographic skills. The course is focused on the micro aesthetics of typography and its communicative potential; it begins with building an understanding and sensitivity to the formal and structural characteristics of letters, type styles and related classification, and gradually

GRDS 407 Final Project Design Research 6 cr.

This is the second half of a year-long design project and the culmination of the design studio training. Students integrate and synthesize acquired knowledge and skills, and elaborate, through concrete design experimentation and implementation, the design proposal developed in GRDS 406 with the aim of arriving at a completed graphic design output by the end of the term. Students work independently and in consultation with a chosen advisor from the faculty. Work in progress is presented and discussed with a panel of advisors over the course of the term. The completed projects are presented for evaluation to a jury of faculty members and invited professionals.
Prerequisite: GRDS 406.

GRDS 462 Approved Experience 1 b.

This is an eight-week professional training period at a recognized graphic design studio or graphic design department within a web design, television station, advertising agency, publishing house or other approved workplace in Lebanon or abroad. The training should ensure students apply their knowledge and acquire professional experience in the field of graphic design. For other mandatory core courses such as ARCH 121, ARCH 122 and ARCH 223, please refer to the Architecture core course descriptions.

ARD Elective Course Offerings

The elective courses in the Department of Architecture and Design are distributed into three main categories and are subject to change as new electives are introduced every year. Some electives are open to students in all faculties.

Category A: Representation (ARCH 01 and GRDS 01).

Category B: History (ARCH 02 and GRDS 02) and Theory (ARCH 03 and GRDS 03).

Category C: Technology (ARCH 04), Engineering (05), Professional Practice (ARCH 06, GRDS 06), Digital Media (GRDS 04) and Typography (GRDS 05).

Electives are chosen in consultation with the assigned advisor and in accordance with the load distribution.

Category A: Representation**ARCH 010 Photography 3 cr.**

This course aims at providing architecture students with a comprehensive understanding of the basics of black and white and color photography, its techniques and aesthetics. Students learn how to use their cameras and light meters and are taught, through hands-on practice, the fundamentals needed in traditional black and white printing in the darkroom. The course includes slide lectures and discussions around the works of classic masters and contemporary experts of the medium, field trips, as well as presentations by well-established photographers specializing in architectural photography.

ARCH 011 Imaginary Landscapes: Utopia and Architecture 3 cr.

Although utopia does not belong to a particular field of research, it often relates to architecture, representing a delicate discrepancy between 'ideals' and 'space.' It has always been the concern of architects and designers to imagine utopias, so much so that the history of architecture may no longer ignore this literature and abundant work that relates the sociopolitical and economic field to spatial manifestations of desires and dreams.

ARCH 012 The Black Box**3 cr.**

The Black Box is a workshop and seminar open to architecture, graphic design and other students. Class meets once a week. Metaphorically, the black box stands for a hiding device that creates a feeling of curiosity and triggers imagination. This seminar is an exploration, interaction and experimentation with the concept of the black box through the three sub-themes of Desire, Imagination and the Unseen. Students are invited to respond to contemporary artistic works (cinema, architecture, literature) as well as to present their own through the media of photography, script-writing and projection. *Prerequisite: Advanced standing.*

ARCH 013 Contemporary Scenography**3 cr.**

The course aims to present contemporary scenography as a comprehensive spatial art form rather than merely a decorative tool. As such the course will focus on the inherent transformative and performance processes of contemporary scenography. The spectrum of scenography today ranges from theater scenography to performance design, exhibition scenography, film/media scenography as well as urban and/or natural environments. This has proven to be, and to contain, an incomparable potential for a very rich interaction between theatrical space and the actors/audience.

ARCH 014 Pages from an Autobiography**3 cr.**

The goal of this class is to explore, practice and theorize the form of the portfolio (more broadly understood as the work of creative individuals representing themselves) in order to gain a certain level of mastery over the process of presentation and representation of previously produced work. Through a theoretical, analytical and practical process of reading, looking and producing visual, textual and multimedia material, students will gain exposure to the global culture of the making of portfolios and practical knowledge in the production of such (physical or online) representational artifacts. Ultimately, this workshop will raise and investigate the complex and never-ending issue of self-representation, the portfolio obviously being an autobiography of sorts.

**ARCH 015 Micro Devices: Pamphlet on Local
Infrastructure and Representation****3 cr.**

Micro Devices is a course that teaches visualization and diagramming as analytical methods to pursue research on a specific local infrastructural problematic (water, transportation, energy, etc.). The aim is to rigorously tackle that infrastructural issue through mapping and diagramming to produce a visual pamphlet while proposing hybrid and speculative design interventions.

GRDS 012 Silkscreen**3 cr.**

This course teaches students the fundamental principles of silkscreen printing and to be creative in their approach to printmaking. Silkscreen, one of the most versatile and widely used methods of printmaking, will be fully explored in this studio class through demonstrations and self-initiated projects. Students will be encouraged to experiment with multiple techniques and combinations of traditional and contemporary methods of serigraphy, and search for solutions that best translate the nature of their work to the medium. *Prerequisites: GRDS 214, ARCH 112 or FAAH 202; and FAAH 234.*

ARCH 027 Regional Architecture: Lebanon 3 cr.

This course presents various aspects (mainly physical and social) of regional architecture in Lebanon, covering a period of over a century and a half (1820-1970). It introduces students to various typologies of local architecture, based on case studies of the city of Beirut as well as other rural areas in Lebanon. It also examines the importance of heritage architecture in shaping urban neighborhoods and socio-spatial practices and introduces urban renewal strategies in areas facing various forms of dilapidation.

ARCH 028 Generative Tropes of Contemporary Architecture 3 cr.

At the cusp of a new digital era, that of the parametric, laden with scripted form and built with a combination of digital and manual fabrication tools, this seminar will consider the production of architecture in the past two decades in search of formal tendencies—tropes or systems—that have been repeatedly utilized in the production of contemporary architecture. By categorically identifying these ‘tropes,’ the overarching pedagogical agenda of this seminar is to enable students to develop tectonic and formal literacy. The first part of this seminar will involve a survey of contemporary architecture in order to identify and categorize recurring formal tropes while introducing students to a thematic lexicon in contemporary architecture. The second part of the seminar will include projective and analytical diagramming of select buildings in order to identify part-to-whole relationships as generative tools in production of contemporary architecture while investigating the possibilities of genealogical relationships within the categories.

ARCH 031 On Housing 3 cr.

The course will expose students to housing typology, the study of housing types, through the intensive use of drawing as a critical tool of analysis and representation. Housing types will be analyzed using key local and global case studies drawn from the histories of architecture. Types are understood as distinct architectural inventions that are open to change and mutation. Questions related to the shifting boundaries between private and public, changing demographics, work/life patterns, climatic response and affordable housing will be addressed through the transformations of type.

ARCH 032/URDS 634 Contested Urban Heritage: Reconstructed Cityscapes 3 cr.

The seminar focuses on urban heritage and the politics of its identification, conservation and reproduction in relation to processes of nation building and postwar reconstruction in the Arab World. The principal theoretical position recognizes heritage as an intrinsically contested notion.

The seminar is interdisciplinary in its approach and aims at understanding urban heritage, not only as a historical product, but also as a negotiated entity reproduced every day through the dynamics of city life; social, economic and political. Class discussions are set against theoretical works that include Bourdieu’s Field of Cultural Production, Boyer’s City of Collective Memory, Barthes’ Semiology and the Urban, Lefebvre’s Production of Space, Hewison’s Heritage Industry and Hobsbawm’s Invention of Tradition.

ARCH 033 Remaking our World: Cities and Cinema 3 cr.

This course examines how shifts in urban form and plans for development or reconstruction give rise to cinematic representations. We will also look at how discourses of cinema and their production and design process affect architecture, urbanism and our experiences in the city. In addition, through a workshop, we will get our hands dirty with cameras and experiment with a few short clips ourselves.

GRDS 033 Pre-Brand: A History of Identity Design 3 cr.
 The term branding as we understand it today is a relatively recent development in the history of what is more classically referred to as identity design. Whether the more widespread term “corporate identity” which is rooted in the American business model, or the more form-focused “visual identity” – identité visuelle – as European designers would say, such terms seem to fall short in describing the contemporary version of the practice and are systematically being replaced by the “branding” standard, l’image de marque.

Category C: Technology, Professional Practice, Digital Media, Typography and Urban Studies

Technology

ARCH 040 “Making It”: Models and Prototypes of Complex Structures 3 cr.
 Design and technology studies in schools of architecture are based on the making of things, how they perform in the environment, the experience of the results and their cognitive interpretation. The scientific knowledge and technical expertise available for architecture are extensive and their rate of change is substantial. The course seeks to develop the ability to learn how to learn, a vital necessity for innovation. The teaching focus is on craftsmanship, innovation, conceptual and lateral thinking, new technologies, construction, interdisciplinary work and collaboration with industries.

ARCH 041 Lighting Design 3 cr.
 The course is one of the requisite tools of design. An architect or environmental designer has the ability to render the architectural form with light and to use lighting distribution, intensity, color and modulation to conceive a desired effect. Additionally, light can set the mood for a space – a critical step in the design process.

ARCH 042 Collaborative Research Workshop 3 cr.
 This course operates as an intensive multidisciplinary digital design workshop, aiming at engaging undergraduate students in a lab-based research environment. It aims at forging collaborative research projects among faculty and among students at AUB, linking art, craft, engineering, science and technology with design. The course will engage in experimentation with materials and technology to develop collaborative projects that can impact the built and human environment, intersecting research methods with digital fabrication techniques. The outcome of the course will be to produce a common physical outcome either as a built 1:1 scale intervention or as a physical prototype.
Prerequisite: Senior standing or consent of instructor(s).

Architecture Professional Practice

ARCH 060 Algorithm and Iteration 3 cr.
 Using Grasshopper/Rhino 3D as the main software platform, the course explores the concepts, tools and ways in which parametric programming can lead to greater integration of concept and execution in architectural design.

ARCH 061 DI-LAB Design-Impact Laboratory 3 cr.
 DI-LAB course is designed to engage a group of young architects and engineers in designing and implementing community-based projects in Lebanon. It is a one of a kind platform that provides design and engineering services intended to improve the living conditions of marginalized and neglected communities. It aims for a participatory process that engages the beneficiaries and users in order to incubate sustainable

development. DI-LAB is organized by the American University of Beirut, Department of Architecture and Design and the Center of Civic Engagement and Community Services (CCECS).

ARCH 062/ URPL 665 Development and Planning Policies 3 cr.

The course examines development and spatial planning projects and policies. It investigates policy governance and institutional setup, the role of professional expertise, and the spatial impacts, as well as the social and environmental impacts, on the built and un-built environments. Using case-study analysis of selected cities and towns, the course investigates how policies are elaborated through the use of chosen models, approaches, strategies and tools, privileging certain sectors and for specific ends.

ARCH 063 Do It, Then Fix It As You Go 3 cr.

The course introduces students to alternative ways in starting a design project, whether an object, an installation or a building. It is mainly a hands-on set of small exercises, through modeling, observing and description in a lab-like manner. Through these exercises, students will slowly discover how a ready-made can influence, guide and affect the course of evolution of a project and help in generating new ideas. The ready-made is a mindset preparation that will allow students to deconstruct preconceived ideas about design putting aside all a priori. The aim of such a methodology, that seems unrelated to the subject, will unknowingly allow them to lose their familiarity with the “project-to-be” and see it under a new light. This confrontational process has proven to be a dialectical tool that can be applied to any scale from a small object to an urban scale project. It is a method of work, a line of thought, a new line of investigation.

ARCH 064 Inclusive Design 3 cr.

The material in this course is designed to provide a detailed introduction to the Inclusive/Universal Design philosophy and a theoretical understanding of design tools and techniques.

ARCH 065 Architecture and Culture: Geometry and Design 3 cr.

The course will analyze cultural disciplines, meaning and practice in Islamic architecture from classic to contemporary works. Recognizing the paradigms of Islamic architecture, the course will concentrate on the essential role of geometry in design and urban planning. There will be an in-depth review and discussion of the direction and influence in design, with attention drawn towards a better understanding and discussion of the creative processes relevant to Islamic architecture and the crafts. Living and historic examples will be drawn from Andalusia, North Africa, the Middle East, Turkey, Iran, Arabia and the Indian subcontinent. A workshop will be conducted in Tunis, Fes or Cairo at the beginning of the term.

ARCH 066/ URPL 669 Building and Planning Codes 3 cr.

The class focuses on the spatial and design aspects of property development codes, offering both normative outlook and practical application. The course covers such topics as controls and regulations on development intensity, bulk, accessibility, egress, and health and safety. In a comparative approach, a theoretical overview of planning and building codes from the American context (with reference to best practice planning zoning acts and the International Building Code) will be used to study the Lebanese code.

ARCH 068 Design Innovation and Entrepreneurship 3 cr.
 This course introduces the relationship between architecture & design, entrepreneurship and business innovation, where students are invited to engage their skills beyond the architecture & design fields. The course underlines the role of design thinking as a core trigger to recognizing opportunities and processing them into innovative and successful ventures. With a focus on case studies of start-up companies, the course includes subjects such as establishing a clear project vision, assessing its business prospects, designing a solid business model, and developing a creative implementation strategy.

ARCH 069 New Territories 3 cr.
 The course introduces students to digital design and fabrication through lectures and an applied project in which they will test and experiment with new digital and fabrication techniques. Digital fabrication, between advancements in software, simulation and machinery, is pushing practice today towards more complexity. These techniques have set forth a revolution in the way we make buildings, where the process of making has radically changed from the traditional sequence of design-analyze-build to a more interactive and integrative process that intercrosses analytical tools with design, simulation and fabrication.

CIVE 601/ Introduction to GIS and Spatial Analysis 3 cr.
URPL 641
 This course offers an introduction to geographic information systems (GIS) as applied to urban and regional planning, community development and local government. Emphasis is placed on learning GIS technology and spatial analysis techniques through extensive hands-on exercises using real-world data sets such as the census of population and housing. The course includes a small project on an urban planning problem involving the selection of appropriate methods, the use of primary and secondary data, computer-based modeling and spatial analysis.

URPL 664 Urban Land Use Planning 3 cr.
 This course examines the theory and practice of land use planning as it has developed within the wider practice and theorization of planning. The course explores the ways in which land use controls have been developed and managed in different institutional and regional contexts, unraveling the different conceptualizations of planning that support each of them. Special emphasis is placed on the case of Lebanon where the practice of land use planning is explored through a detailed introduction to planning institutions, agencies and regulations.

CIVE 661/ Urban Transportation Planning 3 cr.
URPL 666
 An introductory course on methods and models used in transportation planning with emphasis on the urban context. Topics include travel patterns in urban areas, data requirements for planning and data collection techniques, transportation/land-use interaction, travel demand and network models, transport supply options and evaluation techniques.

ARCH 070 Parametric Mapping and Analysis Algorithms 3 cr.
 Students learn to extract geometric, climatic and topographic data from local climatic statistical and satellite info using parametric tools such as Grasshopper and building physics platforms such as Energy Plus and Open Studio. The charted data is applied through digital simulations to test the environmental and topological performance of massing and the built environment in a specific context. Students will also use

optimization algorithms to test the best-fit iterations to the required parameters. The course outcome will help generate possible topological solutions and environmental strategies to adopt in a specific climate and context. *Prerequisite: Period ARCH 060.*

ARCH 071 Research and Practices of Public Interest Design 3 cr.
The course explores Public Interest Design (PID), an approach where architectural projects result from a participatory approach involving the community in the design process. After mapping the different stakeholders involved in PID, students have the opportunity to survey needs of targeted communities and research methodologies and case studies that helped achieve humanitarian designs. Based on partnerships and a collaborative approach, students develop conceptual project proposals which contribute to solving issues affecting our society today.

Digital Media

GRDS 040 3D Animation 3 cr.
3D animation is an advanced course designed for students who are well versed in both concepts and technical research. The course builds the fundamental understanding of 3D computer modeling, texture mapping, lighting and camera rendering in order to develop 3D animated sequences. The course then introduces students to advanced 3D character modeling, rigging and animation. Student projects combine 3D animation and different output formats, like interactive techniques and motion design. *Prerequisite: GRDS 343 or consent of instructor.*

GRDS 043 Advanced Digital Animation 3 cr.
Building upon the foundations of the Motion Graphics course, this elective will explore the impact of time-based media on visual communication by focusing on three areas commonly dealt with in the field: translation of information datasets into time-based media, and how the mapping of this visual information can be augmented through time and motion sequences. Creating “hero characters” within a sequential narrative, identifying characteristics of the lead elements (humanoid or design-based) and rendering these “personalities” in the way they move.

Typography

GRDS 053 Advanced Arabic Typography 3 cr.
In addition to a new and summarized historical overview, the study of Arabic calligraphy involves dealing with the problems facing this traditional art in its efforts at modernization, innovation and adaptation to new technologies. This consists of two approaches to the subject, one that looks at the Arabic script, calligraphy, as an art by itself and the other that ponders its reformist and media function or its applications in modern life. *Prerequisite: GRDS 252.*

Graphic Design Professional Practice

GRDS 060 Critical Mapping 3 cr.
The course aims to introduce students to the possibilities of mapping as a research method and tool of visual representation. A critical understanding of the history of cartography and mapping practices combined with a theoretical positioning of the map as a socio-political product supports and informs the practical dimensions of the course. *Prerequisite: GRDS 203 or ARCH 203.*

GRDS 061 GraFix in the Environment 3 cr.
 We are bombarded daily with visual clutter, noise, buildings, people, beggars, cigars, clothes, shops, garbage, cars, horns, broken sidewalks—you name it! Then there are signage, posters and billboards. All are components of our GraFix in the environment. This course is based on research, presentations and a series of small projects illustrating the various aspects of ‘GraFix.’ *Prerequisite: GRDS 203 or consent of instructor. For Architecture students only.*

GRDS 062 Brand Inc. 3 cr.
 This course offers in-depth examination of branding – an increasingly common and central specialization in the contemporary graphic design profession. While looking at the history of the practice and the ways it has been (and is being) critically theorized, students will engage in a series of practical assignments, investigating and addressing existing local cases. In addition to the brand design component and its visual and verbal manifestations, the assignments will cover more fundamental operations of the brand, including brand research and assessment, brand positioning and strategy, brand architecture, brand planning and management, among other less obvious but equally crucial components of the brand development lifecycle.

GRDS 063 If Walls Could Talk/ Talking Walls: Urban Graffiti Animations 3 cr.
 A course offered to Architecture and Graphic Design students covering the techniques, principles and processes of stop motion animation, particularly focusing on painting on walls and urban surfaces. Students are encouraged to explore the relationship of the method of expression and techniques employed with the concepts, themes and issues, using alternate interpretations beyond the literal and classical narrative constraints. Students will be examining motion, tempo, rhythm, depth, color, texture, form, matter and spatial representation and relation. By the end of the course, students will produce a complete edited stop motion animation short film that will be publicly screened in the original setting. *Prerequisite: GRDS 305 or consent of instructor. For Architecture students only.*

GRDS 066 Alternative Comics: The Study and Making of Graphic Narratives 3 cr.
 Through this course students will explore the language of comic art: building a textual and visual narrative, developing the word-image relationship, investigating temporal translations and expanding the concept of time. They will explore comics as a storytelling art form where emphasis is placed on narrative concepts as well as advanced technical and media skills. Students will explore ways in which images can tell a full story independent of the written word through tone, pace, time and implied dialogue, thereby expanding the storytelling range.

GRDS 064 Storytelling in Comics 3cr.
 This class focuses on crafting engaging stories through comics, emphasizing scriptwriting for a visual medium, page layout construction, and character development. Students are encouraged to tackle a variety of subjects, ranging from the fantastical to the intimate, always aiming to make contemporary concerns relatable, and taking full advantage of the narrative tools provided by the medium.

GRDS050**Arabic Type Design****3cr.**

This course is an introduction to Arabic type design. It focuses on the skills and critical thinking required to design and produce digital typefaces. Lectures will take the student through the history, technology and contemporary practices of the industry that has started to take shape during the past 20 years. Basic lettering skills will be explored to aid in the primary focus of creating a functional, flexible and useful Arabic typeface. This course will enhance an understanding of the link between writing by hand, lettering and type design; that is, the transition from script to digital.

GRDS 067**Fanzine****3cr.**

Printed matter has provided a way for artists and individuals to express themselves to just a few, or to many. This class will explore the use of alternative media and will build upon the lessons learned in the publication design class. Projects will apply a variety of specialized publications—some traditional and some completely free-form—allowing students to focus more specifically on the content of their printed pieces, while expanding on the techniques available to them when developing the form thereof. Using printing methods both high- and low-end as well as high- and low-tech, students will explore the ways in which serial media and other types of publications provide an outlet for personal expression. Students will be expected to view this class not as a ‘how-to’ but as a ‘have to’, and they should be prepared to engage politically, socially, culturally, poetically, narratively, but most of all personally.