

Architect

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Curricular map 2015

DA1000 / Introduction to Architecture

Comprehend the bases of architecture, its evolution and the causes of the transformation it has experimented. At the same time, to see the architect from a historical point of view, its current situation, and the contemporary tendencies and working systems.

DA1001 / Composition and Design

Recognize and comprehend the principles and basic elements of the language, form and architectural space, through an experimental process based on two and three dimensions exercises, in order to achieve an approach to the architectural language, the representation methods and developing projects.

DA1002 / Analytical Drawing

Identify and apply the hand drawing basics and techniques used for the analysis and representation of the architectural thoughts (outlines and sketches), understanding how to use drawings as an essential communication tool during the design process.

DA1003 / Descriptive Geometry

Know and comprehend the principles and the elements of descriptive geometry, develop the ability to analyze and understand the existing typologies, conceiving formal proposals based on the rational thinking.

DA1010 / Elements of Architecture

Comprehend and explain the principles of the architectural composition, with the aim to explore the interrelationship between each of its elements, through the functional needs and structural criteria.

DA1395 / Architectural Representation I

Identify the rational-expressive tools and methods applied to the representation process of the space, as well as the basic architectural objects, from developing an idea until the project's definition.

DA3002 / Analysis of Architecture

Identify the architectural object within its dimensions, components, tangible and intangible; subsequently analyze buildings that will be the base for the approach in the architectural design.

DA1396 / Digital Applications in Architecture

Use different digital representation tools and techniques to be able to develop the representation of the different stages of a project through 2D drawings and 3D modeling.

DA2000 / Architectural Design I

Apply the theoretical knowledge and design abilities, by developing architectural projects of low and medium programmatically complexity, in order to perceive the architectural object as an habitable space, creating a critical judgment and the capacity to explore and innovate the architectural proposal.

DA2220 / Architectural Representation II

Know and apply the presentation regulations and techniques and the elaboration of sketches, architectural and constructive drawings, constructive details, including the different installations and basic equipments, in order to create a technical description of the project from the design process until its final presentation

DA2080 / Site Analysis

Analyze sites of different scales and determine its sensibility towards the environment, land use and development potentials, in order to define the coherent working lines in the design process.

DA2056 / Construction Materials

Distinguish the basic construction materials such as wood, steel, concrete and glass, and their properties, in order to describe the chemical composition, historic evolution, actual implementations, constraints, architectural opportunities, as well as the new and potential products.

DA2031 / Statics and Strenght of Materials

Distinguish and explain the basic concepts of the structural behavior (work loads, reactions, shear, momentum, torsion, etc.) and the mechanical performance (deformation, permissible loads, types of failure, etc), in order to obtain the bases to design the structural elements.

DA2005 / Architectural Design II

Apply the theoretical knowledge and design abilities, by developing architectural projects of low and medium programmatically complexity, in order to perceive the architectural object as a sustainable response to the conditions of the environment that surrounds it, creating a critical judgment and the capacity to explore and innovate through the architectural proposal.

DA2221 / Design Communication

Communicate an architectural project in its different stages, in order to use all the adequate tools to put together a speech, according to the different application fields.

DA2066 / Sustainable Architecture - Theory

Recognize and comprehend the principles and basic concepts of sustainability in architecture, in order to be able to give a critical analysis of renowned projects because of its sustainability, its proposals and paradigms, having the design as a response to the environment, including the passive systems.

DA2046 / Introduction to Building Systems

Apply the fundamental principles and regulations for the installations, lighting systems, hydraulic, sanitary and electricity equipments for a residential construction, being able to describe its characteristics, construction process and the abilities to apply it in an architectural design.

DA2036 / Structural Analysis

Understand the structural behavior and its definitions to determine dimensions and geometric properties of the different elements that define a structure, in order to establish the most convenient materials in function of the necessities for the construction.

Contact information

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UDEM

DA 2011 / Architectural Design III

Apply the theoretical knowledge and design abilities, by developing architectural projects of medium programmatically complexity, in order to comprehend the interrelationship between the building and the site, developing the exploration and innovation capacities through an architectural proposal.

DA1397 / Universal History of Architecture

Identify and analyze the architecture's development in the Euro-Asian cultures: covering the Middle and Far East, the Greek Roman world as far as the Christianity at the end of the XVII century.

DA2060 / Construction and Building Technology

Recognize the systems and construction processes with major usage in the environment, to be able to connect materials, their procedure and techniques construction, in site as well as with the federal, state and local regulations, and their application in the architectural design.

DA2040 / Concrete and Steel Structures

Explain the behavior of the different steel and concrete structures, as well as the advantages and disadvantages in the architectural design, through the theory of the structural basic properties, in order to achieve the correct use of the structural elements.

DA2015 / Architectural Design IV

Apply the theoretical knowledge and design abilities, by developing architectural projects of high programmatically complexity, with a strong urban context influence, in order to develop a critical judgment and the capacity to explore and innovate through the architectural proposal.

DA2085 / Introduction to Urbanism

Describe the historical, social, cultural and economical phenomenons that concern the urban morphologic and cities' sustainability, communities and urban districts; explaining the participation of the municipality, developers, communities, architects and urban planners.

DA2222 / History of Mexican and Latinamerican Architecture

Distinguish and comprehend the spatial, formal and tectonics transformations of the Mexican architecture within its geographic and social - historical - cultural frames, connecting it with the inheritance that defines the identity of the Latin-American towns.

DA2051 / Advanzed Building Systems

Apply the fundamental principles and regulations to elaborate installations, lighting systems, hydraulic, sanitary and electricity equipments for commercial and institutional constructions.

DA3000 / Integral Architectural Design I

Apply the theoretical knowledge and design abilities in a residential project with real characteristics and low programmatically complexity, in order to develop a critical judgment and the capacity to explore and innovate in the architectural proposal.

DA2091 / Urban Design

Comprehend the concepts of designing urban spaces, experimenting with the morphology, patterns and structural elements, such as spatial districts, nodes, edges, paths and landmarks.

DA2223 / History of Modern Architecture

Analyze the spatial, formal and tectonic transformations within architecture and urbanism, from the humanism age until the reasoning age, in order to comprehend the growth of the different aspects of today's architecture, generating a critical juddment.

DA3033 / Project Budget and Cost Management

Apply the knowledge for the administrative costs in the architectural works, with the purpose to determine a project's budget, comparing effort and time versus the investment.

DA3012 / Structures Seminar

Apply the knowledge gained to establish a structural system (building suitability) according to the architectural necessities, based on the mechanical behavior, constructive procedure, construction costs and design implications (cost-benefit analysis).

DA3005 / Integral Architectural Design II

Apply the theoretical knowledge and design abilities in a commercial or institutional with real characteristics and medium programmatically complexity, in order to develop a critical judgment and the capacity to explore and innovate in the architectural proposal.

DA2224 / History and Critic of Contemporary Architecture

Analyze the spatial, formal and tectonic transformations within architecture and urbanism, from the second postwar period until present days, in order to comprehend the historic grounds and the debate subjects of a contemporary critique through a critical judgment.

DA3050 / Advanced Architecture Seminar

Understand and express a critical judgment about the trends in architecture and urbanism.

DA3037 / Construction Management

Comprehend the Professional Construction Project Management, in order to be applied in the process and development of a architectural project construction, as well as the different elements that define the request for tender process, participation in competitions and project management.

DA1924 / Morphology

Apply the knowledge of modeling and geometric programming in the ordinary cases of the architectural design, urban design and space, in order to understand the digital manufacture and design, from different programming languages and parametric design platforms.

DA2225 / Generative Geometry

Identify the elementary bases to generate a simple and dynamic geometric systems inside the architectural and urban design projects, in order to comprehend the design and its production from a complex geometric model.

DA3042 / Preservation of Architecture

Compare the restoration techniques and architectural preservation, including the buildings that are considered historical monuments, likewise the options of recycling and adapting old buildings.

DA4010 / Architectural Final Evaluation Program I

The student will be able to know the methodology of descriptive research with the use of qualitative tools, applied to the analysis, design of buildings and urban spaces.

DA4015 / Architectural Final Evaluation Program II

The student will determine their ability to exercise their profession.

DA4005 / Professional Practices Directed in Design

The student will be able to apply the criteria, knowledge and skills acquired through the study of the career in the real work field.

<u>DA4000 / Directed Professional Practices in Construction</u> The student will be able to apply the criteria, knowledge

The student will be able to apply the criteria, knowledge and responsibilities, formed and acquired through the study of the career in the field of real work.

DA3047 / Study of Landscape Elements

The student will be able to find the interrelation of man with the environment with urban sites, public and residential spaces.

DA3055 / Urban Landscaping

The student will be able to identify the interrelation between man and city.

DA3065 / Acoustic Design and Lighting

The student will be able to apply the principles and standards of acoustic design and lighting recognizing the nature of the propagation and control of sound, as well as its techniques and regulations.

DA3072 / Interior Design and Image

The student will be able to understand the relationship between people, space, architecture and the environment.

DA3080 / Tools for Project Analysis

The student will be able to distinguish the digital tools of analysis and simulation in relation to the physical environment as a means of optimization

DA3085 / Standards and Procedures for Certification

The student will be able to know ways of qualifying and certification of the sustainable features of the buildings, as well as their importance and requirements to obtain.

DA3075 / Techniques, systems and materials

The student will be able to know some of the most relevant sustainable building forms available in our context.

DI3310 / Interdisciplinary Design Solutions

The students will be able to develop projects jointly with students from other design programs, assessing collaborative learning, and experience interdisciplinary learning.

FM1045 / Mathematics for Architecture and Design

The student will be able to apply the basic concepts of Euclidean geometry, angles, triangles, trigonometric functions, analytical geometry and vectors.

BASIS OF COMPOSITION		ARCHITECTURAL DESIGN				INTEGRAL ARCHITECTURAL DESIGN		PROFESSIONAL ARCHITECTURAL DESIGN	
FIRST	SECOND	 Third	, FOURTH	FIFTH	SIXTH	 SEVENTH	EIGHT	NINETH	TENTH
DA1001 12 Composition and Design	DA1010 12 Elements of Architecture	DA2000 12 Architectural Design I	DA2005 12 Architectural Design II	DA2011 12 Architectural Design III	DA2015 12 Architectural Design IV	DA3000 12 Integral Architectural Design I	DA3005 12 Integral Architectural Design II	DA4005 12 Architectural Final Evaluation Program I	DA4000 12 Architectural Final Evaluation Program II
DA1002 6 Analytical Drawing	DA1395 6 Architectural Representation I	DA2220 6 Architectural Representation II		DA2221 6 Design Communication		DI3310 6 Interdisciplinary Design Solutions			
DA1003 6 Descriptive Geometry	DA1924 6 Morphology	DA2225 6 Generative Geometry	DA2066 6 Sustainable Architecture Theory						
		DA2080 6 Site Analysis			DA2085 6 Introduction to Urbanism	DA2091 6 Urban Design			
DA1000 6 Introduction to Architecture	DA1397 6 Universal History of Architecture		DA2223 6 History of Modern Architecture	DA2222 6 History of Mexican and Latinamerican Architecture	DA2224 6 History and Critic of Contemporary Architecture	DA3002 6 Analysis of Architecture	DA3042 6 Preservation of Architecture		
	DA1396 6 Digital Applications in Architecture	DA2056 6 Construction Materials	DA2046 6 Introduction to Building Systems	DA2060 6 Construction and Building Technology	DA2051 6 Advanzed Building Systems		DA3033 6 Project Budget and Cost Management	DA3037 6 Construction Management	
FM1045 6 Mathematics for Arch. and Design**		DA2031 6 Stat. and Strenght of Materials**	DA2036 6 Structural Analysis	DA2040 6 Concrete and Steel Structures	DA3012 6 Structures Seminar		Professional Elective Course	Professional Elective Course	Professional Elective Course
						DA4000 3 Professional Practices Directed in Construction	DA4005 3 Professional Practices Directed in Design		
								DA3050 6 Archit. Seminar	
HU1015 6 Comparative International Contexts	HU1005 6 Social Thinking of the Church		FM1100 6 Interpretation of Statistical Information	ID1500 6 Academic Writings	6 Selected T. General Elective Studies	6 Current T. General Elective Studies	HU1010 Global Competitions	AD1200 Leadership in Organizations	Modern T. General Elective Studies
42 CREDITS	42 CREDITS	42 CREDITS	42 CREDITS	42 CREDITS	42 CREDITS	39 CREDITS	39 CREDITS	36 CREDITS	24 CREDITS
									390 CREDITS
Induction Seminar Arch.		Co-Curricular	Co-Curricular	Social Training Workshop	3 Co-Curricular	Co-Curricular			

Additional Requirements:

Elective Courses, offered by the Department of Continuing Education:

Computer Aided Drawing, Three-dimensional Modeling, Geographic Information Systems, Use of tools for Machining, Follow-up to competitions, Portfolio Design, among others.

Professional Concentrations:

 Sustainable Building · Landscaping and Urbanism Interior architecture

Sustainable Building

DA3080 / Tools for Project Analysis DA3085 / Standards and Procedures for Certification

DA3075 / Techniques, Systems and Materials

Landscaping and Urbanism

DA3047 / Study of Landscape Elements DA3050 DA3055 / Urban Landscaping Interior architecture

DA3065 / Acoustic Design and Lighting DA3072 / Interior design and image

^{*} For these courses it is necessary to demonstrate the knowledge and basic skills in the use of software for the design and modeling / ** Requirement to cover the math propedeutics FM0100, the verbal area Cl0100 and / or general

PMFE It to take this subject it is necessary to pre-enroll, take up to 36 credits in 9th and 10th semester, make sure to follow requirements / PEF II: it is necessary to take it in the last semester, for the dissertation it is necessary to have all the subjects of the plan accredited of studies. Professional stay: it is a requirement to accredit the course that includes 180 hours of practice as a work stay in a company / - - - Subjects that must be taken at the same time.