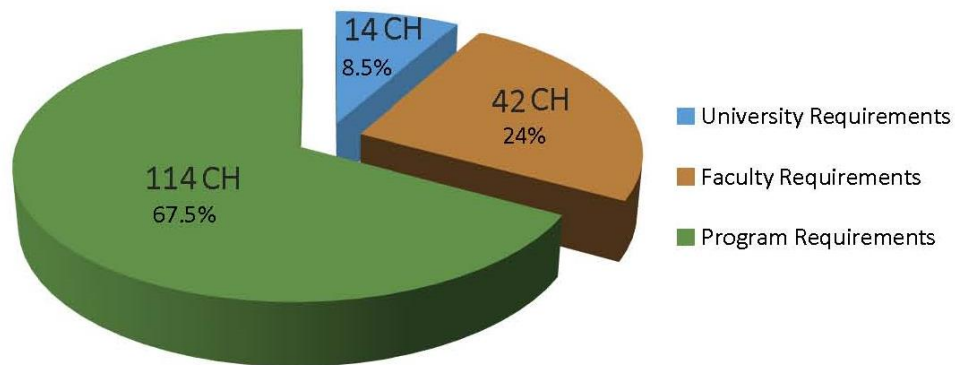


Environmental Architecture and Urbanism Program



Program Description

Driven by the current urgency of building more environmentally friendly buildings and cities, the environmental Architecture and Urbanism Program (ENVR) aims at preparing architects and urban designers specialized in environmental design. Graduates are capable of understanding the relationship between humans and buildings and between buildings and their environment. They can integrate all the aspects dealing with the built environment and how it is planned, designed, used, furnished, landscaped, managed, and valued by the society in their creative thinking while dealing with complex architectural and urban environment problems. The program introduces students to building science and enables them to conceive the basic concepts of sustainable architecture and urbanism. They are trained to balance functional and ecological demands when developing policies or designs for new construction. Graduate will be able to deal with modern techniques and tools for learning and linking theory and practice. All efforts are directed towards achieving environmental architecture and urbanism.

Career Prospects

The acquired skills through the program qualifies the graduates to occupy a wide range of jobs, fulfilling the market's diversity of needs. They can work as architects or urban designers whether in multi-national and local companies or in architectural, urban design firms and environmental design consultancies. Moreover, graduates will be equipped to work in fields of interior design, visualization using computer graphics, 3D modeling, and model making. Specializations extend as well to dimensions of project/construction management, site supervision, and quantity surveying. The ENVR graduates can deal with environmental building assessment techniques and be aware of issues related to building energy efficiency, net zero systems and net plus systems. The current market in Egypt is thriving for such kind of interdisciplinary-skilled graduates who have strong background in environmental design that is highly needed nowadays.

Program Concentrations

There are no specified concentrations in this Program.

Agreements with another University

The program is in partnership with the University of East London (UEL), United Kingdom for a Bachelor Dual Degree. Students joining this agreement will pay an additional fee, to substitute expenses for the external Quality Audits/Moderation Boards that will take place in Egypt. The Graduates should receive two B.Sc. certificates, one from the University of East London, and one from Ain Shams University. Students are allowed to study a full year or more in London with a 10% reduction in the UK tuition fees.

Furthermore, the program under the ASU umbrella is part of the CNRD - Centers for Natural Resources and Development- project, which is one of 5 centers of Excellence in Germany under the Exceed program. The CNRD is coordinated by Cologne University of Applied Sciences (CUAS - Germany) and includes 13 universities partners from Indonesia, Chile, Mexico, Nepal, Egypt, Jordan, Kenya, Ethiopia, Sudan, Bangladesh, Vietnam, and Brazil. The CNRD is supported by the Federal Ministry for Economic Cooperation and Development, Exceed and DAAD.

Required Courses

In order to get a Bachelor of Science Degree in this program, and to satisfy the Program ILOs, the following set of courses need to be completed.

University Requirements Courses for Environmental Architecture and Urbanism Program

Code	Course Title	Credits and SWL			Contact Hours			
		CH	ECTS	SWL	Lec	Tut	Lab	TT
ASU011	Technical English Language	0	n/a	n/a	n/a	n/a	n/a	n/a
ASU111	Human Rights	2	2	50	2	1	0	3
ASU112	Report Writing & Communication skills	3	4	100	2	2	0	4
ASU113	Professional Ethics and Legislations	3	4	100	2	2	0	4
ASU114	Selected Topics in Contemporary Issues	2	2	50	2	0	0	2
-	ASU Elective (1)	2	3	75	2	1	0	3
-	ASU Elective (2)	2	2	50	2	0	0	2
Total		14	17	425	12	6	0	18
Pool of ASU Elective (1) Courses								
ASU321	Innovation and Entrepreneurship	2	3	75	2	1	0	3
ASU322	Language Course – can accept equivalent certificates	2	3	75	2	1	0	3
ASU323	Introduction to Accounting	2	3	75	2	1	0	3
ASU324	History of Engineering & Technology	2	3	75	2	1	0	3
Pool of ASU Elective (2) Courses								
ASU331	Human Resource Management	2	2	50	2	0	0	2
ASU332	History of Architecture	2	2	50	2	0	0	2
ASU333	Introduction to Marketing	2	2	50	2	0	0	2
ASU334	Building Safety and Fire Protection	2	2	50	2	0	0	2
ASU335	Literature and Arts	2	2	50	2	0	0	2
ASU336	Business Administration	2	2	50	2	0	0	2

Faculty Requirements Courses for Environmental Architecture and Urbanism Program

Code	Course Title	Credits and SWL			Contact Hours			
		CH	ECTS	SWL	Lec	Tut	Lab	TT
PHM011	Basic Mathematics	0	n/a	n/a	n/a	n/a	n/a	n/a
PHM012	Mathematics (1)	3	5	125	3	2	0	5
PHM013	Mathematics (2)	3	5	125	3	2	0	5
PHM021	Vibration and Waves	3	5	125	3	1	1	5
PHM022	Electricity and Magnetism	3	5	125	3	1	1	5
PHM031	Statics	3	5	125	2	2	1	5
PHM032	Dynamics	3	5	125	2	2	1	5
PHM041	Engineering Chemistry	3	5	125	2	1	2	5
PHM111	Probability and Statistics	2	4	100	2	2	0	4
ENG111	Training	0	n/a	n/a	n/a	n/a	n/a	n/a
MDP081	Production Engineering	3	5	125	2	0	3	5
MDP011	Engineering Drawing	3	6	150	1	3	2	6
CEP011	Projection and Engineering Graphics	3	6	150	1	3	2	6
CSE031	Computing in Engineering	2	4	100	2	0	0	2
ENG011	Fundamentals of Engineering	2	4	100	2	1	0	3
CES151	Structures and Properties of Construction Materials	2	4	100	2	1	1	4
ARC463	Renewable Energy Systems and Economics	2	4	100	2	1	0	3
ARC371	Architecture Project Management	2	4	100	2	1	0	3
Total		42	76	1900	34	23	14	71

Environmental Architecture and Urbanism Program Requirements courses

Code	Course Title	Credits and SWL			Contact Hours			
		CH	ECTS	SWL	Lec	Tut	Lab	TT
	Ain Shams University Requirements	14	17	425	12	6	0	18
	Faculty of Engineering Requirements	42	76	1900	34	23	14	71
ARC111	Principles of Architecture Design Studio	3	6	150	1	5	0	6
ARC113	Vernacular Architecture Design Studio	3	6	150	0	6	0	6
ARC213	Environmental Architecture Design Studio (1)	3	6	150	0	6	0	6
ARC214	Environmental Architecture Design Studio (2)	3	6	150	0	6	0	6
ARC312	Sustainable Architecture Design Studio (1)	3	6	150	0	6	0	6
ARC313	Sustainable Architecture Design Studio (2)	3	6	150	0	6	0	6
ARC133	Introduction to History and Theory of Arts and Architecture	3	4	100	3	0	0	3
ARC141	Architectural Representation	3	5	125	1	4	0	5
ARC142	Digital Presentation of The Built Environment	2	4	100	1	0	3	4
ARC241	Modeling of The Built Environment	2	5	125	1	0	3	4
ARC151	Building (1): Conventional Construction Systems	3	5	125	2	3	0	5
ARC152	Building (2): Finishing Works	3	5	125	2	3	0	5
ARC253	Building (3): Sustainable Construction	3	5	125	2	3	0	5
ARC351	Working Design (1): Execution Drawings Coordination, Annotation and Coding	3	6	150	1	4	0	5
ARC352	Working Design (2): Blow-Ups Detailing, Items Specifications and BOQs	3	6	150	1	4	0	5
ARC451	Working Design (3): Execution Documents Complexity	3	5	125	1	4	0	5
ARC261	Control of Thermal Environment	2	3	75	1	2	0	3
ARC262	Principles of Sustainable Architecture	3	5	125	2	2	0	4
ARC361	Lighting in Architecture	2	3	75	1	2	0	3

ARC362	Acoustics in Architecture	2	3	75	1	2	0	3
ARC363	Renewable Energy and Buildings	2	4	100	1	2	0	3
ARC365	Building Performance Simulation	3	5	125	1	4	0	5
ARC462	Sustainable Building Rating Systems	2	4	100	1	2	0	3
UPL212	Principles of Urban Design and Landscape	3	4	100	3	0	0	3
UPL313	Eco Urban Design	3	5	125	1	4	0	5
UPL412	Sustainable Contextual Architecture Design Studio	3	6	150	0	6	0	6
UPL221	History and Theory of Urbanism	3	4	100	2	2	0	4
UPL332	Sustainable Urban Development	3	4	100	2	3	0	5
UPL242	Sustainable Urban Landscape	3	5	125	1	4	0	5
UPL351	Housing Studies	3	4	100	1	4	0	5
UPL463	Environmental Impact Assessment	3	5	125	2	2	0	4
CEP113	Surveying	2	4	100	1	1	1	3
CES115	Structural Analysis for Architecture Engineering	2	4	100	1	2	0	3
CES226	Concrete Structures for Architecture Engineering	2	4	100	1	2	0	3
CES345	Steel Structures for Architecture Engineering	2	3	75	1	2	0	3
CEP251	Green Building Systems and Infrastructure	2	4	100	1	2	0	3
	Environmental Architecture Elective (1) – Pool 1	2	4	100	1	2	0	3
	Environmental Architecture Elective (2) – Pool 1	2	4	100	1	2	0	3
	Environmental Architecture Elective (3) – Pool 2	3	5	125	2	2	0	4
	Environmental Architecture Elective (4) – Pool 2	3	5	125	2	2	0	4
ARC493	Environmental Architecture Graduation Project (1)	2	4	100	1	2	0	3
ARC494	Environmental Architecture Graduation Project (2)	6	16	400	0	12	0	12
Total		170	298	7450	94	161	21	276
Pool 1 of Environmental Architecture Elective Courses								
ARC322	Architectural Criticism and Project Evaluation	2	4	100	1	2	0	3
ARC323	Built Environment Accessibility	2	4	100	1	2	0	3
ARC341	Photography and Architecture	2	4	100	1	2	0	3
ARC368	Soundscape and Aural Architecture	2	4	100	1	2	0	3
ARC425	Contemporary Vernacular Architecture	2	4	100	1	2	0	3
UPL371	Human Behavior & the Built Environment	2	4	100	1	2	0	3
UPL381	Introduction to Geographic Information Systems	2	4	100	1	2	0	3
Pool 2 of Environmental Architecture Elective Courses								
ARC472	Building Commissioning	3	5	125	2	2	0	4
ARC473	Building Life Cycle Assessment	3	5	125	2	2	0	4
UPL413	Introduction to Urban Design	3	5	125	2	2	0	4
UPL424	Selected Topics in Architecture and Urbanism	3	5	125	2	2	0	4
UPL435	Urban and Architectural Heritage	3	5	125	2	2	0	4
UPL436	Urban Renewal	3	5	125	2	2	0	4
UPL464	Environmental Planning	3	5	125	2	2	0	4
UPL472	People and Environment	3	5	125	2	2	0	4

Environmental Architecture and Urbanism Program Courses Tree

