Landscape Architecture Program

Curriculum structure and contents

Program structure

- Total number of courses (NC): 63
- No. of credit hours (CH): 170
- European Credit Transfer System (ECTS): 300
- Student Workload (SWL): 7500
- Total Contact Hours:

1	Lectures	Lec.	90
2	Tutorials	Tut.	168
3	Laboratory	Lab	21
	Total	**TT**	**279**

Requirements (%)

1	University Requirement	UR	8 %
2	Faculty Requirement	FR	25 %
3	Discipline Requirement	DR	67 %

Practical/Field Training: the student must perform field training for 12 weeks in industrial or service facilities

		Subject area	**NARS%**	**Program%**
1	SS	Social Sciences and Humanities	8-12	10.7
2	BM	Business Management	2-4	3.2
3	BS	Mathematics and Basic Sciences	18-22	18.8
4	EK	Engineering Knowledge	4-6	5.7
5	BE	Basic Engineering Sciences	25-30	27.2
6	EA	Engineering Applications and Design	25-30	28.7
7	PT	Project and Training	4-6	5.7
		Total		100

Professional information

Program Mission

The mission of Landscape Architecture program (LAAR) is to prepare distinguished engineering graduates of Architects and Landscape Architects capable of keeping pace with the global perspective of sustainable landscape practices and technological development. LAAR prepares a diverse student body to become leaders within the field of architecture and landscape architecture. Students are instilled with the theoretical, technical and life skills necessary to address the complex and continually changing ecological, social and technological challenges associated with the design, conservation and management of architecture and landscapes. Educational emphasis is placed on developing creative and critical thinking skills, high moral character and ethical behavior, exposure to various geographies and cultures, and an independence of mind and freedom of spirit. Therefore, LAAR aims the following intentions:

PM 1. To enhance the students' awareness of specific non-related issues to their specialization sciences, especially which are related to human sciences to enhance their social involvement.

PM 2. To stimulate design creativity and critical thinking.

PM 3. To augment the intellectual capacity to develop architectural, landscape, and urbanism solutions in an environment based on scientific research, technological innovation and sustainability.

PM 4. To prepare students to acquire the individual skills and ethics required for long-term learning and competent professional practice; and

PM 5. To equip students with the required basic knowledge of engineering sciences and interpersonal skills to understand, coordinate with, and lead other engineering disciplines in the architectural profession.

Program aims

Landscape Architecture Engineering Program is an engineering program that is specialized in creating and conserving workable, democratic and meaningful indoor/outdoor places for people to live and work in. Landscape architecture profession pursues projects at all scales, in both town and country, from individual streets to national parks. It requires an aptitude for creativity, a capacity to merge and cross diverse knowledge to produce imaginative but workable solutions, since landscape architects often work and collaborate with engineers, surveyors, community planners, biologist, agriculturists and foresters.

The program graduates are distinguished by their potential to handle a diversity of work that is characterized by its multidisciplinary nature which makes the profession interesting and stimulating. The graduates can advise on, plan, design and oversee the creation, regeneration and development of external land areas such as gardens and recreational areas, as well as residential, industrial and commercial sites. However, they also have the mastery of architecture, the profession of designing buildings, communities, artificial constructions and environments, furnishings and decorations. In this sense, the program graduates can carry out other related missions such as supervision of construction work, and the examination, restoration, or remodeling of existing sites/buildings. All are done pursuing the concept of quality of life/sustainability.

Then the main aims and specific objectives of the Landscape Architecture Program at the Faculty of Engineering in Ain Shams University are:

- **PA1.** Supporting a strong undergraduate program focusing on the development of sound thinking skills, personal vision, and high moral character and ethical behavior through exposure to the broad range of landscape architecture and architecture activities, and technical skills as well.
- **PA2.** Graduating high calibres in an effort to increase the diversity of leaders within the field of landscape architecture and architecture.
- **PA3.** Fostering well-respected faculty within the University and broader academic setting, who have the support network and skills necessary to succeed in teaching, research, community service and creative works.
- **PA4**. Offering the needed facilities, technology, travel and internship opportunities, as a means to help ensure student success.
- **PA5.** Making positive contributions to the broader social and ecological context, and develop a respected visible reputation, through community service-based research and teaching activities.

Program levels and courses

The following table shows the student status and the study levels depending on the number of credit hours that the student completed. Whenever the student has completed 20% of the graduation requirements, he will be transferred from one level to a higher level (0-4).

Study Level	Student Status	Achieved Credit Hours
General (0)	Freshman	0 CH to less than 34 CH
First (1)	Sophomore	35 CH to less than 68 CH
Second (2)	Junior	69 CH to less than 102 CH
Third (3)	Senior-1	103 CH to less than 136 CH
Fourth (4)	Senior-2	137 CH to less than 170 CH

University Requirements

To achieve this goal, Ain Shams University has designed a number of courses planned to build the student personality, develop his skills, and increase his awareness of different topics. These courses are called University Requirements. The Faculty of Engineering Ain Shams University has selected some of these courses to be offered within the Engineering Programs. These courses are:

List of University requirements courses.

Code	Course Title	Credits and SWL			Contact Hours			
		CH	ECTS	SWL	Lec	Tut	Lab	TT
ASU011	Technical English Language	0	4	100	2	2	0	4
ASU111	Human Rights	2	2	50	2	1	0	3
ASU112	Report Writing and 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 and Technology	2	3	75	2	1	0	3
Pool of ASU Elective (2) Courses								
ASU331	Human Resources 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

A placement test in English Language will be conducted for some admitted students to the Faculty of Engineering. If the student passes this test, then he will be exempted from taking the Technical English Language Course. The Technical English Language course is a pre-requisite for all Faculty requirements courses. For ASU322 – Language course, any non-English language is accepted including Arabic. If a student has an equivalent certificate, he is exempted from taking this course. Examples of equivalent certificates: TOEFL, IELTS … etc. History of Architecture Course is not eligible for students enrolled in Architectural Engineering Program, Landscape Architecture Program, Environmental Architecture and Urbanism Program, and Housing Architecture and Urban Development Program.

Faculty Requirements

To achieve these Intended Learning Outcomes, a set of courses must be completed as a Faculty Requirement. These courses are divided into Basic Science Courses and Basic Engineering Courses.

List of Faculty requirements courses.

Code	Course Title	Credits and SWL			Contact Hours			
		CH	ECTS	SWL	Lec	Tut	Lab	TT
PHM011	Basic Mathematics	0	4	100	2	2	0	4
ENG111	Field Training	0	12	300	0	10	15	25
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
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
-	Structures and Properties of Materials Elective	2	4	100	2	1	1	4
-	Engineering Economy Elective	2	4	100	2	1	0	3
-	Project Management Elective	2	4	100	2	1	0	3
Total		42	76	1900	34	23	14	71

Pool of Structures and Properties of Materials Elective Courses								
MDP151	Structures and Properties of Materials	2	4	100	2	1	1	4
EPM211	Properties of Electrical Materials	2	4	100	2	1	1	4
CES151	Structures and Properties of Construction Materials	2	4	100	2	1	1	4
Pool of Engineering Economy Elective Courses								
MDP231	Engineering Economy	2	4	100	2	1	0	3
ARC471	Feasibility Studies	2	4	100	2	1	0	3
ARC463	Renewable Energy Systems and Economics	2	4	100	2	1	0	3
UPL271	Society and Housing Economics	2	4	100	2	1	0	3
UPL471	Urban Economics	2	4	100	2	1	0	3
EPM119	Engineering Economy and Investments	2	4	100	2	1	0	3
CEI261	Engineering Economics and Management	2	4	100	2	1	0	3
CES171	Engineering Economics and Finance	2	4	100	2	1	0	3
Pool of Project Management Elective Courses								
MDP232	Industrial Project Management	2	4	100	2	1	0	3
ARC371	Architecture Project Management	2	4	100	2	1	0	3
EPM411	Project Management for Electrical Engineering	2	4	100	2	1	0	3
CSE441	Software Project Management	2	4	100	2	1	0	3
CES271	Project Management Essentials in Construction	2	4	100	2	1	0	3

A placement test in Mathematics will be conducted for all admitted students except some High School Degrees which are determined by the Faculty Council. If the student passes this test, then he will be exempted from taking Basic Mathematics Course. The Basic Mathematics course is a pre-requisite for all Faculty requirements courses.

Specialization requirements

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

List of Landscape Architecture 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
ARC112	Creativity and Design Studio	4	8	200	0	8	0	8
ARC131	History of Arts and Architecture (1): Ancient Civilizations	3	4	100	3	0	0	3
ARC132	History of Arts and Architecture (2): History of Islamic and Western Architecture	3	5	125	2	2	0	4
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	Modelling 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
ARC254	Building (3): Landscape Construction	2	3	75	1	3	0	4
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
ARC261	Control of Thermal Environment	2	3	75	1	2	0	3
ARC262	Principles of Sustainable Architecture	3	5	125	2	2	0	4
ARC364	Outdoor Lighting and Effects	2	3	75	1	2	0	3
ARC368	Soundscape and Aural Architecture	2	4	100	1	2	0	3
UPL211	Context and Place Design Studio	4	8	200	0	8	0	8
UPL212	Principles of Urban Design and Landscape	3	4	100	2	2	0	4
UPL213	Mixed-use design studio	4	7	175	0	8	0	8
UPL311	Urban and Landscape Design Studio	4	8	200	0	8	0	8
UPL411	Mega Projects Urban Design Studio	4	8	200	0	8	0	8
UPL221	History and Theory of Urbanism	3	4	100	2	2	0	4
UPL341	Horticulture and Garden Design	2	4	100	1	2	0	3
UPL342	Arid Landscape Architecture Design Studio	4	7	175	0	8	0	8
UPL343	Landscape Working Design (1): Landscape Detailed Working Documents	3	4	100	1	4	0	5
UPL441	Landscape Working Design (2): Landscape Execution Documents Complexity	3	5	125	1	4	0	5
UPL351	Housing Studies	3	4	100	1	4	0	5
UPL462	Urban Ecology and Environmental Studies	2	3	75	1	2	0	3
UPL481	Urban Informatics	3	5	125	1	4	0	5
CES115	Structural Analysis for Architectural Engineering	2	4	100	1	2	0	3
CES225	Concrete and Steel Structures	3	5	125	2	2	0	4
CEP113	Surveying	2	4	100	1	1	1	3
CEI311	Infrastructure Planning and landscape Irrigation	2	3	75	1	2	0	3
MEP241	Technical Installations	2	3	75	1	2	0	3
	Landscape Architecture Elective (1) – Pool 1	2	4	100	1	2	0	3
	Landscape Architecture Elective (2) – Pool 1	2	4	100	1	2	0	3
	Landscape Architecture Elective (3) – Pool 2	3	5	125	2	2	0	4

Code	Course Title	Credits and SWL			Contact Hours			
		CH	ECTS	SWL	Lec	Tut	Lab	TT
	Landscape Architecture Elective (4) – Pool 2	3	5	125	2	2	0	4
UPL495	Landscape Architecture Graduation Project (1)	2	4	100	1	2	0	3
UPL496	Landscape Architecture Graduation Project (2)	6	18	450	0	12	0	12
Total		170	300	7500	90	168	21	279

Pool 1 of Landscape Architecture Elective Courses								
ARC323	Built Environment Accessibility	2	4	100	1	2	0	3
UPL334	Site Analysis	2	4	100	1	2	0	3
UPL344	Landscape for Dwellings and Public Buildings	2	4	100	1	2	0	3
UPL361	Outdoor Noise Propagation in Built Environment	2	4	100	1	2	0	3
UPL371	Human Behaviour and the Built Environment	2	4	100	1	2	0	3
UPL381	Introduction to Geographic Information Systems	2	4	100	1	2	0	3
CEP251	Green Building Systems and Infrastructure	2	4	100	1	2	0	3
Pool 2 of Landscape Architecture Elective Courses								
ARC441	Building Information Modelling (BIM)	3	5	125	1	4	0	5
UPL313	Eco Urban Design	3	5	125	1	4	0	5
UPL331	Planning and Urban Upgrading	3	5	125	1	4	0	5
UPL435	Urban and Architectural Heritage	3	5	125	2	2	0	4
UPL442	Ecological Landscape	3	5	125	2	2	0	4
UPL463	Environmental Impact Assessment	3	5	125	2	2	0	4

Study Plan /program tree