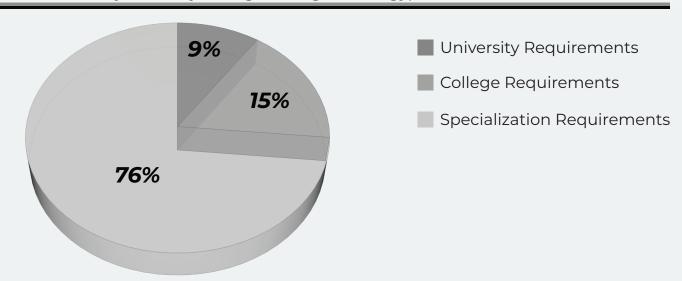
Ain Shams University - Faculty of Engineering, Cairo, EgyptMuseum Environments:



Housing Architecture and Urban Housing program Mission and Goals

Program Mission

Qualifing graduates with all necessary competences to understand the housing market and real estate development; graduates will gain knowledge in housing typology, provision, policies, finance, legislation, and management. It qualifies graduates to use digital technologies and software as design aiding tools to generate and analyses spatial data, produce integrated architecture documents, and land mapping. The HOUD emphasizes the integration of social, economic, environmental, along with physical aspects to create safe, inclusive, healthy, and sustainable cities. It introduces graduates to contemporary trends and practices in housing industry and urban development schemes such as smart housing/cities.

Graduates of the HOUD program can handle with different jobs in related fields to the housing and urban development sector ranging from architecture level to the urban design and planning level.

Program Goals

The main goal of the programme is to prepare architects and urban planners specialised in Housing Architecture and Urban Development approaches. Graduates are capable of developing advanced creative thinking to design architecture projects, multi-functional complexes, and innovative problem-solving skills to develop processes for housing development, renewal refurbishment and the regeneration place and place making. They are capable of relating to multidisciplinary housing subjects and to critically analyze and evaluate existing context of the built environment and construction constrains, in relation to social cultural needs and economic market and policy frameworks. The programme introduces students to sciences, theories, methodologies, techniques, and tools relating to the architectural engineering and urban design, as well as develop necessary skills to understand market needs and social and cultural context related to housing and urban. Graduate will be able to deal with modern techniques and tools for learning and linking theory and practice.

Ain Shams University - Faculty of Engineering, Cairo, EgyptMuseum Environments:

University Requirements for Housing Architecture and Urban Development Program

| Course Code | Course Title | Credit Hours | | | |
|----------------------------------|--|--------------|--|--|--|
| ASU011 | Technical English Language | 0 | | | |
| ASU111 | Human Rights | 2 | | | |
| ASU112 | Report Writing and Communication skills | 3 | | | |
| ASU113 | Professional Ethics and Legislations | 3 | | | |
| ASU114 | Selected Topics in Contemporary Issues | 2 | | | |
| - | ASU Elective (1) | 2 | | | |
| - | ASU Elective (2) | 2 | | | |
| | 14 | | | | |
| Pool of ASU Elective (1) Courses | | | | | |
| ASU321 | Innovation and Entrepreneurship | 2 | | | |
| ASU322 | Language Course – can accept equivalent certificates | 2 | | | |
| ASU323 | Introduction to Accounting | 2 | | | |
| ASU324 | History of Engineering and Technology | 2 | | | |
| | Pool of ASU Elective (2) Courses | | | | |
| ASU331 | Human Resources Management | | | | |
| ASU332 | History of Architecture | 2 | | | |
| ASU333 | Introduction to Marketing | 2 | | | |
| ASU334 | Building Safety and Fire Protection | 2 | | | |
| ASU335 | Literature and Arts | 2 | | | |
| ASU336 | Business Administration | 2 | | | |



Ain Shams University - Faculty of Engineering, Cairo, EgyptMuseum Environments:

College Requirements for Housing Architecture and Urban Development Program

| Course Code | Course Title | Credit Hours | |
|-------------|---|--------------|--|
| PHM011 | Basic Mathematics | 0 | |
| ENG111 | Field Training | 0 | |
| PHM012 | Mathematics (1) | 3 | |
| PHM013 | Mathematics (2) | 3 | |
| PHM021 | Vibration and Waves | 3 | |
| PHM022 | Electricity and Magnetism | 3 | |
| PHM031 | Statics | 3 | |
| PHM032 | Dynamics | 3 | |
| PHM041 | Engineering Chemistry | 3 | |
| PHM111 | Probability and Statistics | 2 | |
| MDP081 | Production Engineering | 3 | |
| MDP 001 | Engineering Drawing | 3 | |
| CEP011 | Projection and Engineering Graphics | 3 | |
| | Computing in Engineering | 2 | |
| CSE031 | | | |
| ENG011 | Fundamentals of Engineering | 2 | |
| - | Structures and Properties of Materials Elective | 2 | |
| - | Engineering Economy Elective | 2 | |
| - | Project Management Elective | 2 | |
| | Total Credit Hours | 42 | |
| | Pool of Structures and Properties of Materials Elective Courses | | |
| MDP151 | Structures and Properties of Materials | 2 | |
| EPM211 | Properties of Electrical Materials | 2 | |
| CES151 | Structures and Properties of Construction Materials | 2 | |
| | Pool of Engineering Economy Elective Courses | | |
| MDP231 | Engineering Economy | 2 | |
| ARC471 | Feasibility Studies | 2 | |
| ARC463 | Renewable Energy Systems and Economics | 2 | |
| UPL271 | Society and Housing Economics | 2 | |
| UPL471 | Urban Economics | 2 | |
| EPM119 | Engineering Economy and Investments | 2 | |
| CEI261 | Engineering Economics and Management | 2 | |
| CES171 | Engineering Economics and Finance | 2 | |
| | Pool of Project Management Elective Courses | | |
| MDP232 | Industrial Project Management | 2 | |
| ARC371 | Architecture Project Management | 2 | |
| EPM411 | Project Management for Electrical Engineering | 2 | |
| CSE441 | Software Project Management | 2 | |
| CES271 | Project Management Essentials in Construction | 2 | |

Ain Shams University – Faculty of Engineering, Cairo, EgyptMuseum Environments:

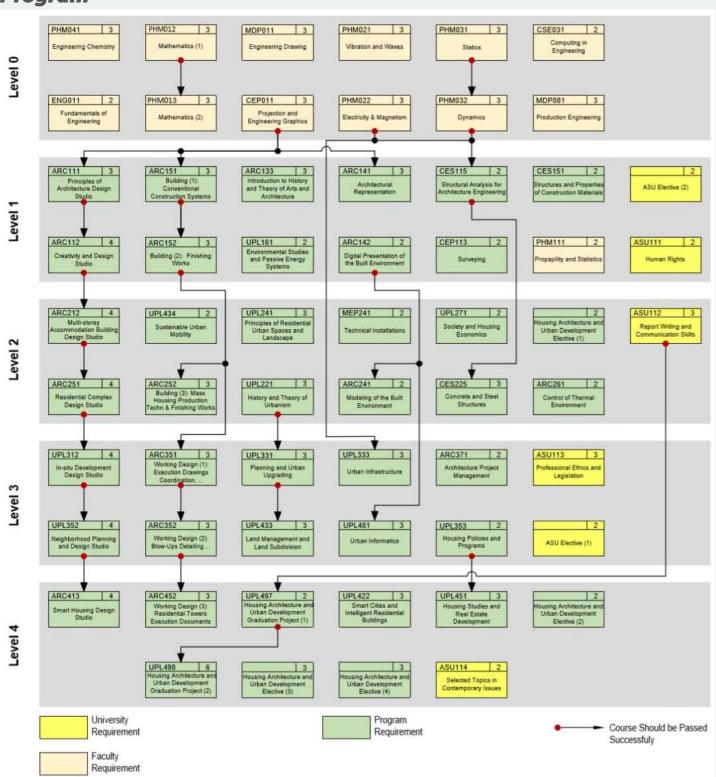
General Specialization Courses for Housing Architecture and Urban Development Program

| Level Year | Code | | 1 | Core/ | | | | | |
|------------|-----------|---------|---|--------|--------------------|--|--|--|--|
| | Year | ASU | Module title | credit | Pathway Related | | | | |
| | Sophomore | | | | | | | | |
| 3 | 1 | ARC111 | Principles of Architecture Design Studio | 3 | Core | | | | |
| 3 | 1 | ARC141 | Architectural Representation | 3 | Core | | | | |
| 3 | 1 | ARC133 | Introduction to History and Theory of Arts and Architecture | 3 | Core | | | | |
| 3 | 1 | UPL161 | Environmental Studies and Passive Energy Systems | 2 | Core | | | | |
| 3 | 1 | CES151 | Structures and Properties of Construction Materials | 2 | Core | | | | |
| 3 | 1 | CES151 | Structural Analysis for Architectural Engineering | 2 | Core | | | | |
| 3 | 1 | ARC 142 | Digital Presentation of the Built Environment | 2 | Core | | | | |
| 3 | 1 | ASU335 | Elective 2- ASU Literature & Art | 2 | Elective | | | | |
| 3 | 1 | ARC152 | Building (2): Finishing Works | 3 | Core | | | | |
| 3 | 1 | ARC112 | Creativity Design Studio | 4 | Core | | | | |
| 3 | 1 | PHM111 | Probability and Statistics | 2 | Core | | | | |
| 3 | 1 | ASU111 | Human rights | 2 | Core | | | | |



Ain Shams University – Faculty of Engineering, Cairo, EgyptMuseum Environments:

Course Tree for Housing Architecture and Urban Development Program



Ain Shams University - Faculty of Engineering, Cairo, EgyptMuseum Environments:

General Specialization Courses for Housing Architecture and Urban Development Program

| Level | | Code | | | Core/ |
|--------------------|------|------------------|---|--------|--------------------|
| | Year | ASU | Module title | credit | Pathway Related |
| | | | Junior | | Related |
| 4 | 2 | ARC261 | Multi Story Accommodation Building Studio | 4 | Core |
| 4 | 2 | MEP241 | Technical Installations | 2 | Core |
| 4 | 2 | UPL251 | Residential Complex Design Studio | 4 | Core |
| 4 | 2 | UPL221 | History & Theory of Urbanism) | 3 | Core |
| 4 | 2 | UPL212 | Principles of residential Spaces and Landscape | 3 | Core |
| 4 | 2 | UPL271 | Society and Housing Economics | 2 | Core |
| 4 | 2 | ARC252 | Building (3): Mass Housing Production Techniques | 3 | Core |
| 4 | 2 | CEP113 | Surveying | 2 | Core |
| 4 | 2 | UPLxxx | Elective Housing (1) | - | Elective |
| 4 | 2 | UPL381 | Introduction to GIS | 2 | Core |
| 4 | 2 | ASU112 | Report writing and communication skills | 3 | Core |
| 4 | 2 | ARC371 | Architecture Project Management | 2 | Core |
| | | | Senior 1 | | |
| 5 | 3 | UPL312 | In-situ Development Design studio | 4 | Core |
| | | | ' " | | |
| 5 5 | 3 | UPL331 | Planning and urban upgrading | 2 | Core |
| 5 | 3 | UPL353 UPL352 | Housing policies and program | 4 | Core |
| | _ | | Neighbourhood planning and design studio | - | Core |
| 5 | 3 | UPL434 | Sustainable Urban Mobility | 2 | Core |
| 5 | 3 | ARC351 | Working Design (1): Execution Drawings Coordination, Annotation and Coding | 3 | Core |
| 5 | 3 | ARC352 | Working Design (2): Blow-Ups Detailing, Items Specifications and BOQs | 3 | Core |
| 5 | 3 | UPL241 | Modelling of built environment | 2 | Core |
| 5 | 3 | UPL481 | Urban Informatics | 3 | Core |
| 5 | 3 | ASU113 | Professional Ethics and legislation | 3 | Core |
| 5 | 3 | ASUxxx | Elective (1) | 2 | Elective |
| | | | Senior 2 | | |
| 6 | 4 | ARC413 | Smart Housing Design Studio | 4 | Core |
| 6 | 4 | UPL433 | Land Management and Land subdivision | 3 | Core |
| 6 | 4 | UPL451 | Housing Studies and Real estate | 3 | Core |
| 6 | 4 | ARC452 | Working Design (3) Residential Towers- Execution Docs | 3 | Core |
| 6 | 4 | UPL422 | Smart Cities and Intelligent Residential Buildi | 3 | Core |
| 6 | 4 | - | Housing and Urban Development Elective 3 | 3 | Elective |
| 6 | 4 | UPL497 | Housing & Urban Graduation Project (1) | 2 | Core |
| 6 | 4 | UPL498 | Housing & Urban Development Graduation (2) | 6 | Core |
| 6 | 4 | UPL372 | Equity and Urban Justice | 2 | Core |
| 6 | 4 | ASU114 | Selected Topics in contemporary Issues | 2 | Core |
| Total Credit Hours | | | 122 | | |