

Ministry of Science Research and Technology



DANESHPAJOOHAN PISHRO
Higher Education Institute

2018

Architectural Engineering-B.A.



DANESHPAJOOHAN PISHRO HIGHER EDUCATION INSTITUTE

- **COURSE CHART**
- **SYLLABUS**
- **SEMESTER CHAR**

Architectural Engineering Undergraduate Course Chart

| General Courses | | | | | | |
|----------------------|---------------------------------|---------|---|-----------|--------------------|--------------|
| Course Code | Course Title | Credits | Theoretical | Practical | Pre-requisite | Simultaneous |
| 61-11-004 | Islamic Thoughts-I | 2 | 2 | 0 | ----- | ----- |
| 61-11-011 | Islamic Thoughts-II | 2 | 2 | 0 | Islamic Thoughts-I | ----- |
| 61-11-003 | Rite of Life (Applied Ethics) | 2 | 2 | 0 | ----- | ----- |
| 61-11-012 | Islamic Revolution of Iran | 2 | 2 | 0 | ----- | ----- |
| 61-11-014 | Analytical History of Islam | 2 | 2 | 0 | ----- | ----- |
| 61-15-001 | Persian Language | 3 | 3 | 0 | ----- | ----- |
| 61-15-002 | English Language | 3 | 3 | 0 | ----- | ----- |
| 61-15-015 | Physical Education | 1 | 0.5 | 0.5 | ----- | ----- |
| 61-15-016 | Exercise-I | 1 | 0 | 1 | Physical Education | ----- |
| 61-15-007 | Family and Population Knowledge | 2 | 2 | 0 | ----- | ----- |
| 61-11-008 | Introduction to Constitution | 2 | 2 | 0 | ----- | ----- |
| 61-11-013 | The Holy Quran Exegesis | 2 | 2 | 0 | ----- | ----- |
| Total Credits | | 22 | Note: Only one course between 'Islamic Revolution of Iran' and 'Introduction to Constitution' shall be taken. | | | |

| Science Courses | | | | | | |
|----------------------|--|---------|-------------|-----------|----------|--|
| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
| 1471010 | Practical Geometry | 3 | 1 | 0 | 2 | ----- |
| 1471011 | Material & Construction Studio | 2 | 0 | 0 | 2 | ----- |
| 1471012 | Understanding and Expressing the Environment | 3 | 1 | 0 | 2 | ----- |
| 1471013 | Architectural Presentation-I | 2 | 1 | 0 | 1 | ----- |
| 1471014 | Architectural Presentation-II | 2 | 1 | 0 | 1 | Architectural Presentation-I |
| 1471015 | Geometry of Landscapes and Monuments | 2 | 1 | 1 | 0 | Practical Geometry |
| 1471016 | Mathematics and Statistics | 3 | 3 | 0 | 0 | ----- |
| 1471019 | Man, Nature & Architecture | 2 | 1 | 1 | 0 | Basic Architectural Design Studio-I |
| 1471017 | Basic Architectural Design Studio-I | 5 | 1 | 0 | 4 | Practical Geometry, Understanding and Expressing the Environment |
| 1471018 | Basic Architectural Design Studio-II | 5 | 1 | 0 | 4 | Basic Architectural Design Studio-I |
| Total Credits | | 29 | | | | |

| Architectural Engineering Courses | | | | | | |
|-----------------------------------|---|---------|-------------|-----------|----------|--|
| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
| 1471020 | Architectural Theories | 3 | 3 | 0 | 0 | Architectural Design Studio-III |
| 1471021 | Introduction to World Architecture | 2 | 2 | 0 | 0 | Basic Architectural Design Studio-II |
| 1471022 | Measurement & Recordings of Historic Buildings | 3 | 0 | 0 | 3 | Basic Architectural Design Studio-II |
| 1471023 | Introduction to Islamic Architecture | 4 | 3 | 1 | 0 | Measurement & Recordings of Historic Buildings |
| 1471039 | Introduction to Contemporary Architecture | 2 | 2 | 0 | 0 | Introduction to World Architecture |
| 1471024 | Surveying | 2 | 1 | 0 | 1 | ----- |
| 1471025 | Regulating Environmental Conditions | 2 | 2 | 0 | 0 | Architectural Design Studio-I |
| 1471026 | Electrical Installations (light and sound) | 2 | 2 | 0 | 0 | Regulating Environmental Conditions |
| 1471027 | Mechanical Installations | 2 | 2 | 0 | 0 | Regulating Environmental Conditions |
| 1471028 | Statics | 2 | 2 | 0 | 0 | Mathematics and Statistics |
| 1471029 | Strength of Materials and Steel Structures | 2 | 2 | 0 | 0 | Statics |
| 1471054 | Concrete Structures | 2 | 2 | 0 | 0 | Statics |
| 1471030 | Cost Estimation | 2 | 1 | 1 | 0 | Construction-II and Report |
| 1471055 | Construction Management | 2 | 1 | 0 | 1 | Cost Estimation |
| 1471031 | Construction Materials | 2 | 1 | 1 | 0 | Material & Construction Studio |
| 1471032 | Construction-I | 2 | 2 | 0 | 0 | Construction Materials, Architectural Design Studio-I |
| 1471033 | Construction-II and Report | 2 | 1 | 1 | 0 | Construction-I |
| 1471034 | Rural Architecture-I | 3 | 1 | 0 | 2 | Architectural Design Studio-I |
| 1471035 | Rural Architecture-II | 3 | 1 | 0 | 2 | Rural Architecture-I |
| 1471036 | Architectural Design Studio-I | 5 | 1 | 0 | 4 | Basic Architectural Design Studio-II |
| 1471037 | Architectural Design Studio-II | 5 | 1 | 0 | 4 | Basic Architectural Design Studio-II, Architectural Presentation-II, Architectural Design Studio-I |
| 1471038 | Architectural Design Studio-III | 5 | 1 | 0 | 4 | Architectural Design Studio-I, Architectural Design Studio-II |
| 1471040 | Introduction to Fundamentals of Physical Planning | 2 | 1 | 0 | 1 | (after passing 90 credits) |
| 1471041 | Analysis of Urban Spaces | 3 | 1 | 2 | 0 | ----- |
| 1471042 | Introduction to Building Renovation | 3 | 2 | 0 | 1 | (after passing 90 credits) |
| 1471043 | Architectural Design Studio-IV | 5 | 1 | 0 | 4 | Architectural Design Studio-III |
| 1471044 | Architectural Design Studio-V | 5 | 1 | 0 | 4 | Architectural Design Studio-II, Architectural Design Studio-IV |
| 1471045 | Technical Design | 3 | 1 | 0 | 2 | Architectural Design Studio-II, Architectural Design Studio-III |
| 1471057 | Final Project | 6 | 0 | 0 | 6 | Architectural Design Studio-IV, Strength of Materials and Steel Structures, Concrete Structures |
| Total Credits | | 86 | | | | |

Elective Courses (not complete)

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|----------------------|--|----------------|--------------------|------------------|-----------------|----------------------|
| | Computer Software in Architectural Engineering | 2 | 2 | 0 | 0 | ----- |
| | English for Architectural Eng. | 2 | 2 | 0 | 0 | ----- |
| | Research Methods | 2 | 2 | 0 | 0 | ----- |
| Total Credits | | - | | | | |

Note: At least 2 credits from the elective courses have to be passed.

| | |
|------------------------------------|-----|
| Total Credits (All Courses) | 142 |
|------------------------------------|-----|

Practical Geometry

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|-------------|--------------------|---------|-------------|-----------|----------|---------------|
| 1471010 | Practical Geometry | 3 | 1 | 0 | 2 | ----- |

Foundations and applications of descriptive geometry; Geometric drawing based on a practical and technical survey.

Material & Construction studio

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|-------------|--------------------------------|---------|-------------|-----------|----------|---------------|
| 1471011 | Material & Construction Studio | 2 | 0 | 0 | 2 | ----- |

Through this course, students will acquire the basic knowledge about materials and their usage in forming architectural designs. Finally, it would enhance the ability of students in creating objects.

Understanding and Expressing the Environment

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|-------------|--|---------|-------------|-----------|----------|---------------|
| 1471012 | Understanding and Expressing the Environment | 3 | 1 | 0 | 2 | ----- |

This course prepares the students for developing their knowledge of architecture projects by analyzing “interior values” architecture and interior design; Analyzing the most important architectures around the world, identifying some characters of the indoor spaces and ...

Architectural Presentation-I

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|-------------|------------------------------|---------|-------------|-----------|----------|---------------|
| 1471013 | Architectural Presentation-I | 2 | 1 | 0 | 1 | ----- |

particular attention will be paid to graphical modalities of documents elaboration.

Architectural Presentation-II

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|-------------|-------------------------------|---------|-------------|-----------|----------|------------------------------|
| 1471014 | Architectural Presentation-II | 2 | 1 | 0 | 1 | Architectural Presentation-I |

Developing the ability of expression in a compatible manner with academic subjects and an architectural concentration; including freehand drawing, contour drawing, analytical drawing, and professional techniques of shading and rendering.

Geometry of Landscapes and Monuments

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|-------------|--------------------------------------|---------|-------------|-----------|----------|--------------------|
| 1471015 | Geometry of Landscapes and Monuments | 2 | 1 | 1 | 0 | Practical Geometry |

An introduction to survey and imagine spaces in a perspective.

Mathematics and Statistics

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|-------------|----------------------------|---------|-------------|-----------|----------|---------------|
| 1471016 | Mathematics and Statistics | 3 | 3 | 0 | 0 | ----- |

This course gives the principles and operational instruments of Mathematics, and it's also aiming to the structural design.

Man, Nature & Architecture

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|-------------|----------------------------|---------|-------------|-----------|----------|-------------------------------------|
| 1471019 | Man, Nature & Architecture | 2 | 1 | 1 | 0 | Basic Architectural Design Studio-I |

The main goal of this course is to introduce students to the connection of architecture and nature, and to consider his role as the creator of architecture, in connecting his work to the nature.

Basic Architectural Design Studio-I & -II

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|-------------|--------------------------------------|---------|-------------|-----------|----------|--|
| 1471017 | Basic Architectural Design Studio-I | 5 | 1 | 0 | 4 | Practical Geometry, Understanding and Expressing the Environment |
| 1471018 | Basic Architectural Design Studio-II | 5 | 1 | 0 | 4 | Basic Architectural Design Studio-I |

These courses contain two major parts:

1. Practices for improving the imagination, analyzing architecture plans by reading the plans and watching the pictures of exteriors and interiors and analyzing the relation between these two; Understanding the effects of light in architecture expressions.
2. Learning architecture design from the step of understanding the problem, until reaching the solution.

Architectural Theories

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|-------------|------------------------|---------|-------------|-----------|----------|---------------------------------|
| 1471020 | Architectural Theories | 3 | 3 | 0 | 0 | Architectural Design Studio-III |

Problematical nature of architecture philosophies; Interaction of philosophical concepts and architectural form and expression. Fundamentals of architectural criticism

Introduction to World Architecture

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|-------------|------------------------------------|---------|-------------|-----------|----------|--------------------------------------|
| 1471021 | Introduction to World Architecture | 2 | 2 | 0 | 0 | Basic Architectural Design Studio-II |

Architectural history in the world from ancient world to 19th century

Measurement & Recordings of Historic Buildings

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|-------------|--|---------|-------------|-----------|----------|--------------------------------------|
| 1471022 | Measurement & Recordings of Historic Buildings | 3 | 0 | 0 | 3 | Basic Architectural Design Studio-II |

This workshop consists of theory and practice, and it is based on developing reflections on the process of the architectural project through a general hypothesis. Observing and surveying one of the architectural masterpieces in Iran is a part of the course.

Introduction to Islamic Architecture

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|-------------|--------------------------------------|---------|-------------|-----------|----------|--|
| 1471023 | Introduction to Islamic Architecture | 4 | 3 | 1 | 0 | Measurement & Recordings of Historic Buildings |

Introduction to concepts of Islamic Architecture and understanding of spatial profile of this architecture.

Introduction to Contemporary Architecture

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|-------------|---|---------|-------------|-----------|----------|------------------------------------|
| 1471039 | Introduction to Contemporary Architecture | 2 | 2 | 0 | 0 | Introduction to World Architecture |

This course is an overview of the innovations which occurred at the end of the 18th century. This course also interprets contemporary architectural works and highlights the multiplicity of views.

Surveying

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|-------------|--------------|---------|-------------|-----------|----------|---------------|
| 1471024 | Surveying | 2 | 1 | 0 | 1 | ----- |

Improving the scientific foundation of students in relation to science and technology of positioning and surveying, and enhancing their skills in implementing practical architectural projects.

Regulating Environmental Conditions

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|-------------|-------------------------------------|---------|-------------|-----------|----------|-------------------------------|
| 1471025 | Regulating Environmental Conditions | 2 | 2 | 0 | 0 | Architectural Design Studio-I |

Describes principles and applications of climate, energy use, and comfort as determinates of architectural form; architectural methods for climate adaptation using non-mechanical means of ventilating, cooling, heating, and lighting; and design and performance predictions for passive approaches to solar heating, heat transfer mechanism, and strategies for climate responsive design.

Electrical Installations (Light and Sound)

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|-------------|--|---------|-------------|-----------|----------|-------------------------------------|
| 1471026 | Electrical Installations (light and sound) | 2 | 2 | 0 | 0 | Regulating Environmental Conditions |

Description of principles and practices for manipulating and enhancing sound in buildings. Information about sound behavior and the organization of architectural elements (deployment of design features, including various geometries and materials) for control of sound in enclosed spaces and between adjacent spaces.

Mechanical Installations

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|-------------|--------------------------|---------|-------------|-----------|----------|-------------------------------------|
| 1471027 | Mechanical Installations | 2 | 2 | 0 | 0 | Regulating Environmental Conditions |

Fundamentals of light-frame construction from soils examination, foundation systems to framing systems, and the integration of plumbing, and heating/cooling systems into the structure

Statics

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|-------------|--------------|---------|-------------|-----------|----------|----------------------------|
| 1471028 | Statics | 2 | 2 | 0 | 0 | Mathematics and Statistics |

Static and force analysis; the study of external forces and force systems and their analytical solutions as applied to bodies at rest (equilibrium). Topic areas include beams, trusses and determinate frames

Strength of Materials and Steel Structures

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|-------------|--|---------|-------------|-----------|----------|---------------|
| 1471029 | Strength of Materials and Steel Structures | 2 | 2 | 0 | 0 | Statics |

Tension, compression, torsion, bending, shear, combined stresses in beams and frames, Mohr circle, beam deflection, buckling of column.

General principles of structural design; Mechanical properties of steel; Tension member; Design of beam; Design of compression member; Design of member in bending and compression; Castellated beams; Design of base plates.

Concrete Structures

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|-------------|---------------------|---------|-------------|-----------|----------|---------------|
| 1471054 | Concrete Structures | 2 | 2 | 0 | 0 | Statics |

Introduction; Physical and mechanical properties of concrete; Design methods and requirements; Analysis and design of rectangular, T, I section in bending, shear, torsion; Members in compression and bending; Interaction curves for columns; Effect of slenderness in design of columns.

Cost Estimation

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|-------------|-----------------|---------|-------------|-----------|----------|----------------------------|
| 1471030 | Cost Estimation | 2 | 1 | 1 | 0 | Construction-II and Report |

Basic procedures, calculations, and techniques used in construction cost estimating including bidding procedures, different types of construction estimates and the appropriate procedures for each one, and the process of quantity take-offs and cost calculations including equipment, overhead, and profit components. Computer applications to produce estimates and review existing software titles.

Construction Management

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|-------------|-------------------------|---------|-------------|-----------|----------|-----------------|
| 1471055 | Construction Management | 2 | 1 | 0 | 1 | Cost Estimation |

Construction management as a project delivery system emphasizing the roles and responsibilities of construction managers, contractors, sub-contractors, owners and design professionals, and how they relate to each other. Fundamentals of project administration from pre-construction planning to project close-out through the study and review of case studies. Includes an overview of cost estimating, meetings, project safety and scheduling.

Construction Materials

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|-------------|------------------------|---------|-------------|-----------|----------|--------------------------------|
| 1471031 | Construction Materials | 2 | 1 | 1 | 0 | Material & Construction Studio |

Lectures, field trips, and laboratory sessions directed toward the nature, potentials, and limitations of a variety of materials and the processes involved with their production and the system compatibility.

Construction-I & -II

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|-------------|----------------------------|---------|-------------|-----------|----------|---|
| 1471032 | Construction-I | 2 | 2 | 0 | 0 | Construction Materials, Architectural Design Studio-I |
| 1471033 | Construction-II and Report | 2 | 1 | 1 | 0 | Construction-I |

Methods of construction, primarily buildings. Construction types: steel; plain, reinforced, and pre-stressed concrete; masonry. Foundations; associated details of frames, walls, roofs, floors, openings, finishes. Disasters, failures, and their causes. Industrialization of the building process.

Rural Architecture-I & II

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|-------------|-----------------------|---------|-------------|-----------|----------|-------------------------------|
| 1471034 | Rural Architecture-I | 3 | 1 | 0 | 2 | Architectural Design Studio-I |
| 1471035 | Rural Architecture-II | 3 | 1 | 0 | 2 | Rural Architecture-I |

An introduction to villages and figuring out their opportunities and threats and also discussing suggestions in order to design their environments; this course includes surveying some buildings in villages, analyzing the conditions and trying to improve the opportunities and solving the threats.

Architectural Design Studio-I

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|-------------|-------------------------------|---------|-------------|-----------|----------|--------------------------------------|
| 1471036 | Architectural Design Studio-I | 5 | 1 | 0 | 4 | Basic Architectural Design Studio-II |

In this project, learning and practicing how to reach a goal and developing the concepts is the main target. Some simpler functions are proposed in this project.

Architectural Design Studio-II

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|-------------|--------------------------------|---------|-------------|-----------|----------|--|
| 1471037 | Architectural Design Studio-II | 5 | 1 | 0 | 4 | Basic Architectural Design Studio-II, Architectural Presentation-II, Architectural Design Studio-I |

An introduction to the concept of “home” and defining its spaces and the relation between them.

Architectural Design Studio-III

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|-------------|---------------------------------|---------|-------------|-----------|----------|---|
| 1471038 | Architectural Design Studio-III | 5 | 1 | 0 | 4 | Architectural Design Studio-I, Architectural Design Studio-II |

An attempt to fulfill the cultural and expressional dimensions in architecture. An experience to focus on the external dimension of architecture; Introduction to Principles of Physical Planning.

Introduction to Fundamentals of Physical Planning

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|-------------|---|---------|-------------|-----------|----------|----------------------------|
| 1471040 | Introduction to Fundamentals of Physical Planning | 2 | 1 | 0 | 1 | (after passing 90 credits) |

Introduction to Principles of Physical Planning and residential complex planning.

Analysis of Urban Spaces

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|-------------|--------------------------|---------|-------------|-----------|----------|---------------|
| 1471041 | Analysis of Urban Spaces | 3 | 1 | 2 | 0 | ----- |

This course intends to focus on land planning and designing in large scales by theory and different practices on land planning.

Introduction to Building Renovation

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|-------------|-------------------------------------|---------|-------------|-----------|----------|----------------------------|
| 1471042 | Introduction to Building Renovation | 3 | 2 | 0 | 1 | (after passing 90 credits) |

This course is an attempt to raise the knowledge of renovations. The study of materials such as wood, concrete and stone is part of this course. After a general introduction to the materials students will work in groups on an exercise and lectures.

Architectural Design Studio-IV

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|-------------|--------------------------------|---------|-------------|-----------|----------|---------------------------------|
| 1471043 | Architectural Design Studio-IV | 5 | 1 | 0 | 4 | Architectural Design Studio-III |

This course focuses on the functional, structural and facility systems in architecture. It is suggested to go through some complicated functions in architecture such as School, Hotel, etc.

Architectural design Studio-V

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|-------------|-------------------------------|---------|-------------|-----------|----------|--|
| 1471044 | Architectural Design Studio-V | 5 | 1 | 0 | 4 | Architectural Design Studio-II, Architectural Design Studio-IV |

Designing a residential complex is the attempt of this course, with considering the environment, culture and economy

Technical Design

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|-------------|------------------|---------|-------------|-----------|----------|---|
| 1471045 | Technical Design | 3 | 1 | 0 | 2 | Architectural Design Studio-II, Architectural Design Studio-III |

This course is managing the relation system between materials, constructive elements, and environmental and functional needs; at workshop students will try to design a project and its constructive aspects. The target is presenting the project in a practical way.

Final Project

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|-------------|---------------|---------|-------------|-----------|----------|---|
| 1471057 | Final Project | 6 | 0 | 0 | 6 | Architectural Design Studio-IV, Strength of Materials and Steel Structures, Concrete Structures |

Final Architectural Plan with elective subject.

Computer Software in Architectural Engineering

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|-------------|--|---------|-------------|-----------|----------|---------------|
| | Computer Software in Architectural Engineering | 2 | 2 | 0 | 0 | ----- |

Intensive introduction to computer-aided design systems for developing construction documentation (working drawings). Lectures and practices focus on learning the methodology of using CAD to efficiently prepare working drawings, as well as discussions regarding industry recognized standards and current technology used in the preparation of documents.

Research Methods

| Course Code | Course Title | Credits | Theoretical | Practical | Workshop | Pre-requisite |
|-------------|------------------|---------|-------------|-----------|----------|---------------|
| | Research Methods | 2 | 2 | 0 | 0 | ----- |

Introduction to research methods; Use of secondary sources; Critique; Round-table research discussion; Academic writing; Writing research proposals.

| Total | Guide | | | | Course Title | | Architectural Engineering-B.A. Semester Chart | | | | | | | | | | Semester | | | |
|-------|---|----|--|-------------------------------|-------------------------|-------------|---|----|--|----|--|----|--|----|---------------------------------|----|----------|----|----|---|
| | AE Architectural Engineering | | G General Course | | | | | | | | | | | | | | | | | |
| | S Science | | E Elective Course | | Credits | Course type | | | | | | | | | | | | | | |
| 20 | Mathematics and Statistics | | Islamic Thoughts-I | | English Language | | Material & Construction Studio | | Practical Geometry | | Understanding and Expressing the Environment | | Architectural Presentation-I | | 1 | | | | | |
| | 3 | S | 2 | G | 3 | G | 2 | S | 3 | S | 3 | S | 2 | S | | | | | | |
| 19 | Statics | | Physical Education | | The Holy Quran Exegesis | | Persian Language | | Construction Materials | | Geometry of Landscapes and Monuments | | Basic Architectural Design Studio-I | | Architectural Presentation-II | | 2 | | | |
| | 2 | AE | 1 | G | 2 | G | 3 | G | 2 | AE | 2 | S | 5 | S | 2 | S | | | | |
| 18 | Introduction to World Architecture | | Strength of Materials and Steel Structures | | Exercise-I | | Islamic Thoughts-II | | Computer Software in Architectural Engineering | | Man, Nature & Architecture | | Basic Architectural Design Studio-II | | Surveying | | 3 | | | |
| | 2 | AE | 2 | AE | 1 | G | 2 | G | 2 | E | 2 | S | 5 | S | 2 | AE | | | | |
| 18 | Introduction to Contemporary Architecture | | | Concrete Structures | | | Construction-I | | Analytical History of Islam | | Regulating Environmental Conditions | | Measurement & Recordings of Historic Buildings | | Architectural Design Studio-I | | 4 | | | |
| | 2 | AE | | 2 | AE | | 2 | AE | | 2 | G | | 2 | AE | | 3 | | AE | | 5 |
| 19 | Islamic Revolution of Iran | | | | | | Construction-II and Report | | Rural Architecture-I | | Electrical Installations (light and sound) | | Introduction to Islamic Architecture | | Architectural Design Studio-II | | 5 | | | |
| | 2 | G | | | | 3 | AE | | 3 | AE | | 2 | AE | | 4 | AE | | 5 | AE | |
| 18 | Rural Architecture-II | | | Rite of Life (Applied Ethics) | | | Introduction to Fundamentals of Physical Planning | | Cost Estimation | | New Structures (or Research Method) | | Mechanical Installations | | Architectural Design Studio-III | | 6 | | | |
| | 3 | AE | | 2 | G | | 2 | AE | | 2 | AE | | 2 | AE | | 5 | | AE | | |
| 19 | Analysis of Urban Spaces | | | | | | Construction Management | | Architectural Theories | | Introduction to Building Renovation | | Technical Design | | Architectural Design Studio-IV | | 7 | | | |
| | 3 | AE | | | | 2 | AE | | 3 | AE | | 3 | AE | | 3 | AE | | 5 | AE | |
| 11 | | | | | | | | | | | Final Project | | Architectural Design Studio-V | | 8 | | | | | |
| | | | | | | | | | | | 6 | AE | | 5 | | AE | | | | |