



College of
Engineering and Architecture

Department of
Architecture

Architecture and Planning Programme (Plan 47)

Intended Learning Outcomes

(ILOs)



Architecture and Planning Programme (Plan 47)

Intended Learning Outcomes (ILOs)



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Preface

Clear intended learning outcomes (ILOs) are a key component of good programme and course planning and assessment for students. ILOs define what a learner will have acquired and will be able to do upon successfully completing their studies. ILOs should be expressed from the students' perspective and are measurable, achievable and assessable.

The curriculum of Architecture and Planning programme enables students to achieve the intended learning outcomes which fulfil the requirements of the Saudi Qualifications Framework (SQF) - Level 6, Specialized Learning Outcomes (SLOs) and Level 6 of the European Qualifications Framework (EQF). Learning outcomes are defined for each course, which, in total, enable the achievement of the overarching programme objectives.



1. PLOs* of Architecture and Planning Programme

Knowledge: At the end of the program, student should be able to

K1	Demonstrate a comprehensive understanding of built environment design and its latest developments.
K2	Demonstrate an in-depth understanding of built environment technologies.
K3	Demonstrate an understanding of the profession's ethics, responsibilities, and regulations.
K4	Demonstrate an understanding of relevant mathematical concepts and scientific theories.
K5	Demonstrate an understanding of research and inquiry methodologies.

Skills: At the end of the program, student should be able to

S1	Apply diverse knowledge to creatively address complex built environment problems.
S2	Analyze the Islamic values that shape human and built environments.
S3	Use scientific research to address complex built environment issues.
S4	Demonstrate proficiency in creating drawings and craftworks.
S5	Employ a variety of communication methods to effectively transfer knowledge and skills.
S6	Effectively use digital skills throughout the design process of the built environment.
S7	Use mathematical operations and quantitative methods to process data and information.
S8	Carry out complex practical tasks and procedures related to the professional practice.

Values, Autonomy and Responsibility:

At the end of the program, student should be able to

V1	Demonstrate commitment to ethics, and professional and academic values.
V2	Demonstrate commitment to self-development.
V3	Demonstrate commitment to society.

* PLOs refers to Programme Learning Outcomes



2. CLOs* of Architecture and Planning Programme

2.1 Knowledge and Understanding

- K1-a Explain processes, methods and fundamentals of designing the built environment.
- K1-b Define functional requirements and relationships for different sectors of the built environment.
- K1-c Demonstrate an understanding of the basics of architectural formation.
- K1-d Demonstrate an understanding of various ways of representing the built environment.
- K1-e Demonstrate an understanding of the history of the built environment.
- K1-f Demonstrate an understanding of theories of the built environment.
- K1-g Describe the conservation methods of the built heritage.
- K1-h Explain the impact of different aspects on the built environment.
- K1-i Demonstrate an understanding of the mutual integration between human and the environment.
- K1-j Demonstrate a clear understanding of how to achieve a sustainable built environment.
- K1-k Demonstrate an understanding of a wide range of advanced knowledge related to the built environment.
- K1-l Demonstrate an understanding of the required knowledge to use software in designing the built environment.
- K1-m Illustrate fundamentals of economics of the built environment sector.
- K1-n Demonstrate an understanding of the fundamentals of project management.
- K1-o Demonstrate an understanding of the visual arts.
- K2-a Demonstrate an understanding of building materials and structure systems.
- K2-b Demonstrate an understanding of various types of infrastructure systems.
- K2-c Demonstrate an understanding of technical installations in buildings.
- K2-d Demonstrate an understanding of the construction process.
- K3-a Demonstrate an understanding of professional ethics and responsibilities.
- K3-b Identify the relevant laws, rules and legislations that regulate the built environment.
- K4-a Demonstrate an understanding of mathematical concepts relevant to the built environment.
- K5-a Demonstrate an understanding of research and inquiry methodologies.

* **CLOs** refers to Course Learning Outcomes



2.2 Skills

- S1-a Make design decisions considering user requirements and various environmental impacts.
- S1-b Solve complicated problems associated with the built environment.
- S1-c Create innovative concepts and forms for the built environment.
- S1-d Apply the theories and methods of designing the built environment.
- S1-e Apply knowledge of structural systems and materials selection.
- S1-f Integrate historical, social, and cultural references into the design of the built environment.
- S1-g Apply professional and regulatory standards.
- S1-h Apply the economic principles affecting the built environment.
- S1-i Utilize project management knowledge.
- S1-j Utilize diverse means to achieve a sustainable built environment.
- S1-k Apply various conservation methods to preserve the built heritage.
- S1-l Analyze factors shaping and influencing the built environment.
- S2-a Analyze the Islamic values that shape human and built environments.
- S3-a Independently seek knowledge and use it appropriately.
- S3-b Analyze data from multiple sources.
- S3-c Formulate results of different experiments.
- S4-a Utilize manual skills to effectively develop and present projects.
- S4-b Efficiently construct physical models.
- S4-c Create drawings with efficiency and precision.
- S5-a Effectively engage in communication with others.
- S5-b Effectively apply digital skills to enhance communication.
- S6-a Effectively use digital skills throughout the design process of the built environment.
- S7-a Use mathematical operations and quantitative methods to process data and information.
- S8-a Carry out complex practical tasks and procedures related to the professional practice.



3.3 Values, Autonomy and Responsibility

- V1-a Demonstrate self-discipline and punctuality.
- V1-b Demonstrate respect to different points of view.
- V1-c Demonstrate commitment to honesty and academic integrity.
- V2-a Manage and complete tasks efficiently under pressure and within deadlines.
- V2-b Demonstrate responsibility for self-learning and ongoing development.
- V2-c Collaborate effectively and lead diverse teams to complete tasks responsibly and constructively.
- V2-d Demonstrate persistence on achievement and distinction.
- V3-a Contribute actively to addressing challenges related to the built environment.



4. ASIIN's LOs

Design competence

Graduates have the ability to

- think creatively and to manage and integrate the efforts of others involved in the planning process,
- gather information, define problems, apply analysis, make critical judgements and formulate strategies for action,
- think three-dimensionally and to develop designs methodically, both scientifically and artistically,
- bring into accordance divergent factors, integrate knowledge and apply skills in creating a design solution.

Knowledge and understanding

Cultural and artistic studies


Graduates

- can apply knowledge of historical and cultural references in international architecture,
- can apply knowledge of the influence of the visual arts on the quality of architectural design,
- have developed an understanding of the heritage of the built environment and issues relating to the protection of historical monuments,
- have developed an awareness of the interconnections between architecture and philosophical and political currents and the cultural development of other creative disciplines.

Social and human sciences

Graduates

- have the ability to develop programmes for construction tasks, defining the needs of clients, the public and users,
- have an understanding of the social context of a construction task,
- have an understanding of the ergonomic and spatial requirements of the working environment,
- have knowledge of the relevant laws, rules and standards for planning, design, construction, health, safety and use of the built environment,
- have knowledge of philosophy, political science and ethics relevant to architecture,

- 
- can apply the knowledge of society, builders and users,
 - can identify and define functional conditions for different environmental areas.

Environmental Science

Graduates

- have an understanding of issues such as environmental sustainability, designs to reduce energy consumption and impact on the environment, and an understanding of passive systems and their controls,
- have an awareness of technology and technology implications,
- have an awareness of the history and practice of landscape architecture, urban design, regional and national planning,
- can apply their knowledge to natural systems and the built environment.

Engineering Sciences

Graduates

- can apply their knowledge of the supporting structure, materials, supply and disposal,
- have an understanding of the processes of technical design and the integration of the supporting structure, structural engineering, and technical finishing into a functional entity,
- have an understanding of infrastructure (development) and of communications, maintenance and security systems,
- have an awareness of the importance of technical infrastructure in the realisation of a design and an awareness of construction cost planning and control,
- have knowledge of the physical problems and the technologies related to the function of a building to provide comfort and protection against the weather.

Design methodology


Graduates

- can apply the knowledge of design theory and methodology,
- have an understanding of design procedures and design processes as well as analysis and interpretation of frameworks,
- have knowledge of the history of design and architectural criticism.

Construction economics / construction management

Graduates

- can apply knowledge of professional, business, financial and legal requirements,

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- have an awareness of the operating principles of the real estate industry, financial relationships, real estate investment, alternative methods of contracting, and facilities management,
 - have an awareness of the potential roles of architects in familiar and in new fields of action as well as in an international context,
 - have an understanding of market mechanisms and their effect on the development of the built environment, an understanding of project control, project development and client consultancy,
 - have an understanding of professional ethics and codes of conduct in relation to the practice of the profession and an understanding of an architect's legal obligations in relation to registration,
 - can plan and coordinate the construction process,
 - can organise the processes involved in the construction of buildings and their economic execution.

Skills

Graduates

- have the ability to work in a team and communicate ideas using language, text, drawing, statistics and models,
- have the ability to use analogue and digital, graphic and modelling skills to analyse and develop a design project, and to communicate this clearly,
- have an understanding of assessment systems using manual and/or electronic means to diagnose built environments.
- Appropriate knowledge, skills and abilities should be acquired by students in all courses of study that aim at a license as an architect.

5. Mapping of CLOs, and ASIIN's LOs

a. Design competence

Graduates have the ability to

1. think creatively and to manage and integrate the efforts of others involved in the planning process,

S1-c	Create innovative concepts and forms for the built environment.
V2-c	Collaborate effectively and lead diverse teams to complete tasks responsibly and constructively.

2. gather information, define problems, apply analysis, make critical judgements and formulate strategies for action,

K5-a	Demonstrate an understanding of research and inquiry methodologies.
S1-a	Make design decisions considering user requirements and various environmental impacts.
S3-a	Independently seek knowledge and use it appropriately.
S3-b	Analyze data from multiple sources.
S3-c	Formulate results of different experiments.
S7-a	Use mathematical operations and quantitative methods to process data and information.

3. think three-dimensionally and to develop designs methodically, both scientifically and artistically,

K1-a	Explain processes, methods and fundamentals of designing the built environment.
K1-b	Define functional requirements and relationships for different sectors of the built environment.
K1-c	Demonstrate an understanding of the basics of architectural formation.
K1-d	Demonstrate an understanding of various ways of representing the built environment.
S1-b	Solve complicated problems associated with the built environment.
S1-d	Apply the theories and methods of designing the built environment.

4. bring into accordance divergent factors, integrate knowledge and apply skills in creating a design solution.

S1-e	Apply knowledge of structural systems and materials selection.
S1-f	Integrate historical, social, and cultural references into the design of the built environment.
S1-g	Apply professional and regulatory standards.
S1-h	Apply the economic principles affecting the built environment.
S1-i	Utilize project management knowledge.
S1-j	Utilize diverse means to achieve a sustainable built environment.
S1-k	Apply various conservation methods to preserve the built heritage.
S1-l	Analyze factors shaping and influencing the built environment.
S2-a	Analyze the Islamic values that shape human and built environments.
S4-a	Utilize manual skills to effectively develop and present projects.
S4-b	Efficiently construct physical models.
S4-c	Create drawings with efficiency and precision.
S6-a	Effectively use digital skills throughout the design process of the built environment.

b. Knowledge and understanding

Cultural and artistic studies

Graduates

1. can apply knowledge of historical and cultural references in international architecture,

S1-f	Integrate historical, social, and cultural references into the design of the built environment.
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2. can apply knowledge of the influence of the visual arts on the quality of architectural design,

K1-c	Demonstrate an understanding of the basics of architectural formation.
K1-o	Demonstrate an understanding of the visual arts.

3. have developed an understanding of the heritage of the built environment and issues relating to the protection of historical monuments,

K1-e	Demonstrate an understanding of the history of the built environment.
K1-g	Describe the conservation methods of the built heritage.
S1-k	Apply various conservation methods to preserve the built heritage.

4. have developed an awareness of the interconnections between architecture and philosophical and political currents and the cultural development of other creative disciplines.

K1-e	Demonstrate an understanding of the history of the built environment.
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c. Social and human sciences

Graduates

1. have the ability to develop programmes for construction tasks, defining the needs of clients, the public and users,

K1-b	Define functional requirements and relationships for different sectors of the built environment.
S1-a	Make design decisions considering user requirements and various environmental impacts.

2. have an understanding of the social context of a construction task,

S1-f	Integrate historical, social, and cultural references into the design of the built environment.
V3-a	Contribute actively to addressing challenges related to the built environment.

3. have an understanding of the ergonomic and spatial requirements of the working environment,

K1-a	Explain processes, methods and fundamentals of designing the built environment.
K1-b	Define functional requirements and relationships for different sectors of the built environment.
S1-d	Apply the theories and methods of designing the built environment.

4. have knowledge of the relevant laws, rules and standards for planning, design, construction, health, safety and use of the built environment,

K3-b	Identify the relevant laws, rules and legislations that regulate the built environment.
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5. have knowledge of philosophy, political science and ethics relevant to architecture,

K3-a	Demonstrate an understanding of professional ethics and responsibilities.
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6. can apply the knowledge of society, builders and users,

S1-a	Make design decisions considering user requirements and various environmental impacts.
S1-e	Apply knowledge of structural systems and materials selection.
S1-f	Integrate historical, social, and cultural references into the design of the built environment.

7. can identify and define functional conditions for different environmental areas.

K1-b	Define functional requirements and relationships for different sectors of the built environment.
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d. Environmental Science

Graduates

1. have an understanding of issues such as environmental sustainability, designs to reduce energy consumption and impact on the environment, and an understanding of passive systems and their controls,

K1-h	Explain the impact of different aspects on the built environment.
K1-i	Demonstrate an understanding of the mutual integration between human and the environment.
K1-j	Demonstrate a clear understanding of how to achieve a sustainable built environment.

2. have an awareness of technology and technology implications,

K1-i	Demonstrate an understanding of the mutual integration between human and the environment.
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3. have an awareness of the history and practice of landscape architecture, urban design, regional and national planning,

K1-e	Demonstrate an understanding of the history of the built environment.
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4. can apply their knowledge to natural systems and the built environment.

S1-j	Utilize diverse means to achieve a sustainable built environment.
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e. Engineering Sciences

Graduates

1. can apply their knowledge of the supporting structure, materials, supply and disposal,

S1-e	Apply knowledge of structural systems and materials selection.
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2. have an understanding of the processes of technical design and the integration of the supporting structure, structural engineering, and technical finishing into a functional entity,

K2-a	Demonstrate an understanding of building materials and structure systems.
K2-c	Demonstrate an understanding of technical installations in buildings.
K2-d	Demonstrate an understanding of the construction process.

3. have an understanding of infrastructure (development) and of communications, maintenance and security systems,

K2-b	Demonstrate an understanding of various types of infrastructure systems.
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4. have an awareness of the importance of technical infrastructure in the realisation of a design and an awareness of construction cost planning and control,

K1-m	Illustrate fundamentals of economics of the built environment sector.
K1-n	Demonstrate an understanding of the fundamentals of project management.
K2-b	Demonstrate an understanding of various types of infrastructure systems.
K2-c	Demonstrate an understanding of technical installations in buildings.

5. have knowledge of the physical problems and the technologies related to the function of a building to provide comfort and protection against the weather.

K1-h	Explain the impact of different aspects on the built environment.
K1-j	Demonstrate a clear understanding of how to achieve a sustainable built environment.

f. Design methodology

Graduates

1. can apply the knowledge of design theory and methodology,

S1-d	Apply the theories and methods of designing the built environment.
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2. have an understanding of design procedures and design processes as well as analysis and interpretation of frameworks,

K1-a	Explain processes, methods and fundamentals of designing the built environment.
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3. have knowledge of the history of design and architectural criticism.

K1-e	Demonstrate an understanding of the history of the built environment.
K1-f	Demonstrate an understanding of theories of the built environment.

g. Construction economics / construction management

Graduates

1. can apply knowledge of professional, business, financial and legal requirements,

S1-g	Apply professional and regulatory standards.
S1-h	Apply the economic principles affecting the built environment.
S1-i	Utilize project management knowledge.
S8-a	Carry out complex practical tasks and procedures related to the professional practice.

2. have an awareness of the operating principles of the real estate industry, financial relationships, real estate investment, alternative methods of contracting, and facilities management,

K1-m	Illustrate fundamentals of economics of the built environment sector.
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3. have an awareness of the potential roles of architects in familiar and in new fields of action as well as in an international context,

K3-a	Demonstrate an understanding of professional ethics and responsibilities.
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4. have an understanding of market mechanisms and their effect on the development of the built environment, an understanding of project control, project development and client consultancy,

K1-m	Illustrate fundamentals of economics of the built environment sector.
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5. have an understanding of professional ethics and codes of conduct in relation to the practice of the profession and an understanding of an architect's legal obligations in relation to registration,

K3-a	Demonstrate an understanding of professional ethics and responsibilities.
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6. can plan and coordinate the construction process,

K1-n	Demonstrate an understanding of the fundamentals of project management.
S1-i	Utilize project management knowledge.

7. can organise the processes involved in the construction of buildings and their economic execution.

K1-m	Illustrate fundamentals of economics of the built environment sector.
K1-n	Demonstrate an understanding of the fundamentals of project management.
S1-h	Apply the economic principles affecting the built environment.
S1-i	Utilize project management knowledge.
S8-a	Carry out complex practical tasks and procedures related to the professional practice.



h. Skills

Graduates

1. have the ability to work in a team and communicate ideas using language, text, drawing, statistics and models,

K1-d	Demonstrate an understanding of various ways of representing the built environment.
S4-b	Efficiently construct physical models.
S4-c	Create drawings with efficiency and precision.
S5-a	Effectively engage in communication with others.
S5-b	Effectively apply digital skills to enhance communication.
V1-a	Demonstrate self-discipline and punctuality.
V1-b	Demonstrate respect to different points of view.
V2-a	Mange and complete tasks efficiently under pressure and within deadlines.
V2-c	Collaborate effectively and lead diverse teams to complete tasks responsibly and constructively.
V2-d	Demonstrate persistence on achievement and distinction.

2. have the ability to use analogue and digital, graphic and modelling skills to analyse and develop a design project, and to communicate this clearly,

S4-b	Efficiently construct physical models.
S4-c	Create drawings with efficiency and precision.
S5-b	Effectively apply digital skills to enhance communication.
S6-a	Effectively use digital skills throughout the design process of the built environment.

3. have an understanding of assessment systems using manual and/or electronic means to diagnose built environments.

K1-l	Demonstrate an understanding of the required knowledge to use software in designing the built environment.
S6-a	Effectively use digital skills throughout the design process of the built environment.
S7-a	Use mathematical operations and quantitative methods to process data and information.

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