

Learning outcomes as per the field of study

ARCHITECTURE

1st higher education degree studies, general academic education profile

taught at the Faculty of Architecture at Poznan University of Technology,

1. Classification of the field of studies within the educational area

Field of studies

Architecture is classified within the technical studies

Profile

A general academic education profile was defined within 2nd degree studies at this field of study.

Admission terms and conditions

A person who is the holder of a certificate of passing his/her secondary school final exams and who acquired the required number of points in accordance with the rating of the resolution of the Senate of Poznan University of Technology on recruitment of candidates for a given academic year can apply for admission to the 1st degree studies at Architecture.

2. Educational goals

- 1) to teach the basic theory and history of architecture and town planning as well as the cultural and technical context of architecture
- 2) to develop basic skills in architectural designing, urban planning and renovation as well as in spatial planning on the basis of basic technical knowledge with the application of traditional and modern (multi-media) designing techniques
- 3) to prepare a graduate for independent, creative work and team work at positions requiring qualifications in architecture in designing companies as well as in the units of self-government and government administration

3. Area descriptors accounted for in the description of the field of studies

The description of the field of study has accounted for all the learning outcomes included in the description of the learning outcomes of technical studies of 1st degree.

4. Professional title

A graduate, upon completion of the studies and having passed his diploma exam, is conferred with the professional title of Architectural Engineer.

5. Learning outcomes

5.1. General learning outcomes

Having completed 1st degree studies of general academic education profile in the field of study Architecture, a graduate has specialised knowledge and basic skills in architectural designing and town planning. The graduate has the right knowledge of the history and theory of architecture,

theory of town planning, arts, construction and building technologies, structures, construction physics and architectural designing and town planning.

The graduate has the right knowledge of the history and theory of architecture, theory of town planning, arts, technical sciences and humanities as well as of shaping the environment of man with the account for the relations between people and architectural objects and the surrounding space.

The graduate is familiar with technical regulations and building law as well as the methods of organisation of an investment process and its course. He/she has proper skills in the collection of information, in shaping man's surroundings depending on man's needs (in this the needs of the disabled people) and in coming up with designs meeting the aesthetic, occupational and technical requirements of architecture and town planning. The graduate is familiar with the building law, economics, the organisation of the investment process as well as the designing process in the country and in other EU countries. The graduate fully understands the role of an architect in a society and the impact of the architect's work upon the environment. The graduate knows a modern, foreign language at B2 level of the Common European Framework of Reference for Languages adopted by the European Council.

The knowledge and skills acquired by the graduate prepare him/her to work as assistant employee as well as an employee in contractorship, building supervision in the scope of urban planning and architectural designing, the surroundings including.

Learning outcomes as per the field of study

ARCHITECTURE

1st higher education degree studies, general academic education profile

Detailed learning outcomes and their reference to the results in the area of technical sciences

Explanations of symbols:

K -learning outcomes as per the field of study

W – knowledge category

U – category of skills

K (following an underscore) category of personal and social competences (KPS)

T1A – learning outcomes in the area of technical sciences for 1st degree studies

Learning Outcomes as per the field	Description of the field specific learning outcomes	Reference to the outcomes of the learning process in the area of technical sciences
KNOWLEDGE		
1) general knowledge (unrelated to the field of engineering education)		
AU1_W01	has explicit, theoretically based knowledge including the key issues and has detailed knowledge of selected issues of the world and Polish history of architecture and town planning, as well as the theory of architectural designing and urban planning as well as the theory of art	T1A_W02 T1A_W03 T1A_W04
AU1_W02	has basic knowledge on modern trends in architectural designing in the scope of architectural designing and town planning and arts - drawing, painting and sculpture	T1A_W05
AU1_W03	has basic knowledge in the understanding of social, historical, natural, economic, organisational, legal and other determinants outside the engineering activity and has basic knowledge of quality management	T1A_W08 T1A_W09
AU1_W04	has basic knowledge connected with professional ethics of an architect	T1A_W10
AU1_W05	has basic knowledge of running a business activity and of technology transfer	T2A_W11
AU1_W06	knows and understands basic terms and principles related to the protection of intellectual and industrial property rights; is able to use the patent data resources	T2A_W10
2) basic engineering knowledge		
AU1_W07	knows the principles of descriptive geometry and technical drawing and can use the software supporting architectural designing and town planning	T1A_W02 T1A_W07
AU1_W08	has proper knowledge in the field of mathematics useful for the formulation of architectural and structural designing related tasks and useful for the solutions of such tasks	T1A_W01
AU1_W09	has knowledge of the theory of structures, strength of materials, geotechnics and foundation engineering	T1A_W01 T1A_W02 T1A_W06

AU1_W10	has knowledge of general engineering and materials technology, construction physics, architectural acoustics and building construction and utility systems	T1A_W02 T1A_W06 T1A_W07
AU1_W11	has knowledge in the scope of basics of ergonomics, building law, organisation and economics of an investment process	T1A_W06 T1A_W09
3) knowledge directly related to respective field engineering tasks		
AU1_W12	has knowledge in the theory of architectural designing and town planning	T1A_W02 T1A_W03
AU1_W13	has detailed knowledge of basics of architectural designing and town planning as well as of spatial planning	T1A_W03 T1A_W04
AU1_W14	has knowledge in the scope of the theory of architecture and town planning	T1A_W04
AU1_W15	has knowledge in the scope of housing, knows the principles of designing residential architecture	T1A_W03 T1A_W04
AU1_W16	knows the issues of designing service oriented architecture, rural architecture, offices and other work places and recreational space	T1A_W03 T1A_W04
AU1_W17	knows the issues of landscape designing and sustainable spatial development	T1A_W04 T1A_W05
AU1_W18	knows the basic methods, techniques, tools and materials used at solving engineering tasks of town planning and rural planning and tasks of technical infrastructure of the town	T1A_W07 T1A_W08
AU1_W19	knows the basic methods, techniques, tools and materials used at solving engineering tasks in the scope of architectural designing of residential and commercial facilities, of designing offices and other work places, of designing recreational space and in the scope of landscape designing	T1A_W07 T1A_W08
AU1_W20	knows the basic methods, techniques, tools and materials used at architectural and technical documentation of a simple structural facility inventory making	T1A_W03 T1A_W04 T1A_W07
AU1_W21	knows the basic methods, techniques, tools and materials used at solving engineering tasks in the scope of renovation and revaluation of architectural and urban historical buildings	T1A_W02 T1A_W03 T1A_W07
AU1_W22	has basic knowledge of useful lives of structural facilities and their technical infrastructure systems	T1A_W06

SKILLS

1) general skills (outside the field of study)

AU1_U01	can acquire information from publications, data bases and other Polish and English sources, can interpret the said information and draw conclusions as well as voice and justify opinions	T1A_U01 T1A_U06
AU1_U02	has self-education skills	T1A_U05
AU1_U03	can prepare and present oral presentations as well as a well-documented elaborations on issues related to architecture and town planning in Polish and English	T1A_U03 T1A_U04 T1A_U06
AU1_U04	can work individually and in a team, can communicate in Polish and English, in this can organise his/her time properly as well as can undertake liabilities and meet the deadlines	T1A_U05
AU1_U05	can communicate using different IT tools in the professional environment and in other environments	T1A_U02 T1A_U07

2) basic engineering skills		
AU1_U06	can use the techniques of manual drawing in the process of designing a simple architectural form on a small scale, and on the basis of the said drawings can come up with interpretations and draw conclusions	T1A_U02 T1A_U08
AU1_U07	can use means of artistic expression, typical for the execution of tasks of designing an architectural composition	T1A_U02
AU1_U08	can make spatial models (mock-ups) allowing for carrying out simulation and experiments with the use of a variety of materials, in this can perceive on their basis, non-technical aspects such as perception processes among others	T1A_U02 T1A_U08 T1A_U10
AU1_U09	can identify a design problem and on the basis thereof, can draw up specification which would constitute the basis for the design of a pretty simple commercial facility	T1A_U08 T1A_U10
AU1_U10	can draw and dimension the basic structural and construction elements in an architectural concept and in the building plans and designs	T1A_U07 T1A_U10
AU1_U11	can use IT techniques respectively to the performance of tasks typical for designing activities related to holding independent technical functions in the construction industry	T1A_U07 T1A_U11
AU1_U12	can make calculations in the area of physics and mechanics of structures, strength of materials, general engineering and construction and utility systems, can prepare specification of materials	T1A_U07 T1A_U08 T1A_U10
AU1_U13	can use selected computer programs supporting design decisions, can design selected components of complex engineering structures - steel structures as well as reinforced concrete, wooden structures that are statistically defined and undefined	T1A_U07 T1A_U09 T1A_U10
AU1_U14	can use English at the level allowing for communication, reading technical texts with field specific vocabulary in the scope of architecture and town planning with comprehension	T1A_U06 T1A_U07
AU1_U15	knows the principles of organisation of the work stand; observes the rules of OHS	T1A_U08 T1A_U11
AU1_U16	can carry out initial economic analysis of the investment yield and assess the labour expenditure of the engineering works	T1A_U10 T1A_U12
AU1_U17	can create his/her own drawings, paintings, pieces of sculpture on the basis of his/her individual interpretation of the surrounding world	T1A_U02
3) skills directly related to engineering problem solving		
AU1_U18	can carry out critical analysis of the manner of operation and assess the existing solutions as regards the engineering and structural issues in architectural designing	T1A_U13 T1A_U14 T1A_U15
AU1_U19	can design heating, ventilation, air-conditioning, sewage, hot and cold water supply systems and is familiar with the principles of the selection of water equipment, pumps, sets of pressure tanks	T1A_U07 T1A_U08 T1A_U09 T1A_U10
AU1_U20	can design the artificial lighting system in an architectural and urban interior	T1A_U07 T1A_U08 T1A_U09

AU1_U21	can, thanks to understanding the relationships between the object the the surroundings, identify the existing functional and spatial resources, can evaluate these resources and come up with respective conclusions on possible transformations in architecture and town planning; can prepare the land development plan for terrain characterised with increasing degree of complexity	T1A_U14 T1A_U15
AU1_U22	can design an architectural facility serving a number of functions, a simple urban complex with residential functions and a complex of facilities with specified functions accounting for the technical requirements of the defined urban context with selected urban facilities	T1A_U07 T1A_U09 T1A_U10
AU1_U23	can carry out the measurements of existing buildings and premises as well as record the results and interpret them	T1A_U15
AU1_U24	can select materials of respective aesthetic properties, as well as physiochemical, structural, fire-fighting and acoustic properties required for architectural designing and urban planning	T1A_U10 T1A_U13 T1A_U14
AU1_U25	can, when formulating engineering tasks and solving them, notice their social, historical, natural, economic and legal aspects and well as aspects related to landscape	T1A_U10
AU1_U26	is skilful in using data libraries based on CAAD software	T1A_U07
AU1_U27	can use various technical and material means for the presentation of an architectural or urban idea	T1A_U15
SOCIAL COMPETENCE		
AU1_K01	can work over a set task independently and can cooperate in a team, assuming a number of different roles therein; demonstrates responsibility in the work performance	T1A_K03 T1A_K04 T1A_K05 T1A_K06
AU1_K02	observes the principles of professional ethics; is responsible for the reliability of the obtained results of his/her work and their interpretation	T1A_K02 T1A_K05
AU1_K03	understands the need of continuous self-education (1st and 2nd degree studies, post-graduate studies) - improvement of professional, personal and social competences	T1A_K01
AU1_K04	understands the need for health care and fitness	T1A_K01
AU1_K05	is aware of the importance of non-technical aspects and effects of engineering activities, in this impact upon the environment and liability for environment affecting decisions	T1A_K02
AU1_K06	can respectively determine priorities for the execution of goals set by himself/herself or by others; is fully aware of the importance of professional conduct; is aware of the liability for tasks performed jointly with others within the team work	T1A_K04 T1A_K03
AU1_K07	can think and act in an entrepreneurial, creative and innovative manner	T1A_K06
AU1_K08	is aware of the importance of the solutions proposed by an architect and liability arising thereunder	T1A_K02 T1A_K07
AU1_K09	is aware of the social and humanistic aspects of the architect's work - a profession of public trust	T1A_K07

