

## **Overview of teaching concept, teaching outcomes, research activity, employment market and professional career recommendations for introducing the interior design module**

Into post-2021/2022 teaching cycles of the first-cycle programme at the Faculty of Architecture of the Cracow University of Technology

### **1. Introduction**

#### **1.1. Motivation**

The motivation behind the modification of the teaching concept is to introduce the interior architecture design model into the second year of the first-cycle Architecture programme at the CUT FoA as a compulsory course in relation to the necessity to adapt the curriculum to new teaching standards for architecture programmes that came into force in 2020. Previously, the subject matter of interior architecture was taught only as an elective course available to an eighth of second-semester second-cycle programme students, with 15 contact hours. This necessitated ensuring teaching quality for this course via staff training and student mobility so that they could gain knowledge and skills from good practices and market-oriented activity.

The pandemic has taught us – both designers and users – how key a well-designed space is to proper functioning. A flexible interior that is subjected to constantly evolving user needs is one of the main objectives of design in the coming years, similarly to answering the challenges of social and climate-related problems. A good interior is not only comfort and functionality, but also a sense of safety and stimulation for development and action. Sensitizing future designers to matters of architectural accessibility both for seniors or persons with disabilities should go hand in hand with creating spaces that are inclusive in social terms and acknowledge the needs of the marginalized and excluded. The vigilance associated with climate change is visible in almost every profession, yet properly designed architecture and interiors can have a measurable impact on minimizing negative environmental impacts. This is why design aligned with ecological awareness, zero waste and education in green energy will have a special place in the interior design module’s curriculum.

Demographic change, as well as the idea of forming a civil society based on equal opportunity and non-discrimination, require increased empathy in terms of satisfying the needs of people endangered by social and digital exclusion. According to the provisions of the UN Convention on the Rights of Persons with Disabilities and the Constitution of the Republic of Poland, everyone has the right to equal treatment and participation in public life.

Sensitivity to the needs of other members of the local community, familiarizing oneself with their expectations, is currently becoming a challenge to socio-economic development, including the introduction of innovative products and services that would account for the diverse needs of consumers in terms of mobility and perception.

The Act on ensuring accessibility to persons with special needs that has been in force since

the 20th of September 2019, which introduced new obligations for public entities in terms of architectural, information, communications and digital accessibility (as well as references the requirements stipulated in the Act on digital accessibility to the websites and mobile applications of public entities), introduced an obligation to provide full accessibility<sup>1</sup> to all public entities, and defines the duties of public bodies in this respect. However, it appears not to be possible to introduce the required changes and improvements without providing both basic and expert-level knowledge in this field. To ensure graduate competitiveness, it is necessary to equip them with practical knowledge of the specificity of interior design, which is based on the general principles of design, the precepts of universal design, sustainable development, lighting engineering, the proper selection and technical properties of furniture and construction materials in the context of the well-being of their users.

## 1.2. Goals of the modification

The goal of the modification of the teaching concept is to improve the quality of and adapt the educational offering in terms of teaching interior architecture design at all levels of teaching. The modification will also cover the introduction of contemporary teaching methods and approaches to interior architecture that highlight ties between theory and practice, while also sensitizing students to user needs. Another goal is to enhance the competence of persons who participate in university-level education in terms of the application of solutions based on the concept of universal design while respecting the natural environment via the use of materials and technologies applied in the spirit of sustainable design, which is to answer the current needs of the economy, employment market, and society.

## 1.3. Teaching concept against the background of three-cycle studies

The interior design course is intended to introduce curriculum content that sensitizes students to the needs of a diverse array of space users. Its introduction is to be preceded by a module taught during the Introduction to architectural and urban design course, which teaches the basic principles of ergonomics and designing residential, commercial and public spaces. The Interior Design course is to be introduced during the first year of the first-cycle programme, in parallel to the single-family residential building design course. The module is to expand on the curriculum associated with current interior design by including:

- Universal design – barrier-free design, the ergonomics of the functioning of persons with mobility and psychological disabilities, technologies that support universal design.
- Social and cultural aspects in design – interior design in various cultural circles, interior design in Poland while accounting for the needs of socially excluded persons, ethnic minorities or migrant communities, inclusion of socially sensitive groups.
- Child welfare education – design that accounts for the proper physical and emotional development of children, the design of childcare facilities, spaces for children with special needs, a sensory approach to design.

<sup>1</sup> Mandatory since the 6th of September 2021.

#### 1.4. Methodological and legal basis

Changes that can be observed in contemporary urbanized space are the result of the impacts of successive recommendations formulated for designers in the spirit of sustainability doctrines. By comparing them in three basic groups: the environmental, social and economic spheres, a complete picture is created of the values expected of contemporary architectural and urban space. Principles shared between all areas were identified, which means that interior design must also be obligated to maintain high standards. These include the use of materials that have a low impact on the environment, which are non-toxic, that require little energy expenditure to produce, or that come from recycling, energy efficiency in production and use, and renewability. The guidelines also include user behaviours over a product life cycle, such as emotionally durable design, which is the design of objects that users become attached to and that do not get replaced quickly, service substitution, which is influencing the replacement of individual modes of use to shared ones, such as car, vacation home, or tool sharing. It was also found essential to assess the consequences of the use of a given product on the state of the environment. In the design of the urbanized environment, specific standards and principles were defined for sustainable architecture and planning, which also includes aspects of building life-cycle assessment and building use. The table below includes lists the most important of these.

Table 1. Guidelines for architectural and urban design in different conceptions of sustainable development<sup>2</sup>

Guidelines for architectural and urban design in different conceptions of sustainable development					
<b>authors:</b>	B. Vale, R. Vale	S. Van der Ryn, p. Cowan	W. McDonough	WWF	S. Roaf, D. Crichton, F. Nicol
<b>principles:</b>	<b>Green Architecture</b>	<b>Ecological Design</b>	<b>Hannover Principles</b>	<b>One Planet Living</b>	<b>Adapting Building and Cities for Climate Change</b>
<b>environmental:</b>	<ul style="list-style-type: none"> <li>- holism,</li> <li>- energy conservation,</li> <li>- climate cooperation,</li> <li>- minimizing resource consumption</li> </ul>	<ul style="list-style-type: none"> <li>- showing nature,</li> <li>- design with nature</li> </ul>	<ul style="list-style-type: none"> <li>- human–nature cooperation,</li> <li>- waste elimination</li> <li>- renewable energy</li> <li>- design based on natural patterns</li> </ul>	<ul style="list-style-type: none"> <li>- natural ecosystems and nature</li> <li>- stop carbon dioxide emissions</li> <li>- local materials</li> <li>- sustainable transport and water management</li> <li>- zero waste</li> </ul>	<ul style="list-style-type: none"> <li>- preserve and restore biodiversity,</li> <li>- low energy use via good design</li> <li>- renewable resource use</li> <li>- waste reduction during construction, occupancy and demolition</li> </ul>
<b>social:</b>	<ul style="list-style-type: none"> <li>- respect for the user</li> </ul>	<ul style="list-style-type: none"> <li>- <i>everybody is a designer</i></li> </ul>	<ul style="list-style-type: none"> <li>- information flow</li> <li>- awareness of design’s impact on the environment</li> </ul>	<ul style="list-style-type: none"> <li>- health and happiness,</li> <li>- culture and heritage</li> </ul>	<ul style="list-style-type: none"> <li>- promotion of environmental health</li> <li>- ensuring comfort of living</li> </ul>
<b>economic:</b>	<ul style="list-style-type: none"> <li>- respect for the place</li> </ul>	<ul style="list-style-type: none"> <li>- place-based solutions</li> </ul>	<ul style="list-style-type: none"> <li>- creating solutions with long-term value</li> </ul>	<ul style="list-style-type: none"> <li>- equal opportunity,</li> <li>- local food</li> </ul>	<ul style="list-style-type: none"> <li>- economic materials that pose no threat to the environment</li> </ul>

Changes in the image of European and Polish cities in recent years stem from legislative changes that were gradually introduced into European law. The first European document that affected construction-sector projects was the directive of the EEC Council of 1985 that introduced mechanisms of assessing a project’s environmental impact, which was amended and renamed as an EU directive in 2001. In the treaty that established the European Union in 1992, one of its goals was specified as attaining lasting and sustainable development in Europe, whose dominant feature would be the protection of the environment. The European Climate Package that has been in force since 2020 assumed limiting greenhouse gas emissions by 20% before 2020, increasing the share of renewable sources in the energy mix up to 20%, and improving energy efficiency by 20%. In 2019, the assumptions of a new transformation in this sphere were adopted – the European Green Deal. It is a new growth strategy aimed at transforming the EU into an equitable and prosperous society that lives in a modern, resource-efficient and competitive economy, which is to reach a zero-level of net greenhouse gas emissions by 2050 and whose economic growth will be detached from using

<sup>2</sup> Haupt P., *Naturalne elementy kompozycji w kształtowaniu współczesnej przestrzeni miejskiej na styku budynku z otoczeniem*,

natural resources. Its goal is also the protection, preservation and enhancement of the EU’s natural capital and safeguarding citizen health and wellbeing against threats and negative environmental consequences. This transformation must be equitable and conducive to social inclusion by placing people first and without losing sight of regions, industry sectors and employees who will face the greatest challenges. This process will lead to deep change, which is why active engagement and trust of society will be a key factor for the effectiveness of the new policies and their acceptance. Based on these assumptions, legal recommendations are formulated in each Member State – including Poland. Norway uses other regulations in this field.<sup>3</sup>

Universal design is another doctrine in interior architecture design that focuses on user needs. International law has been pointing to the need to introduce universal design concepts into state policies for many years now. Already in 2001, the Committee of Ministers of the Council of Europe adopted a resolution (the so-called Tomar Resolution), which concerned introducing universal design principles into the curricula of all occupations working on the built environment (ResAP(2001)1). In it, we can read: ‘Universal design issues should be included in all types and levels of education influencing our physical environment’. On the 12th of October 2009, the Committee of Ministers of the Council of Europe issued a recommendation to Member States on achieving full participation via universal design.

We also cannot ignore the significance of the UN Convention on the Rights of Persons with Disabilities (hereinafter referred to as CRPD), which was ratified on the 25th of October 2012 (Dz.U. 2012, item 1169). It is an essential document that regulates the rights of persons with disabilities to participation in public life as equals, in an independent and self-sufficient manner. Art 2. Of the CRPD was the first to introduce a definition of universal design into Polish law. Legal acts and documents that regulate universal design and public and digital accessibility, in chronological order, are presented below:

- Resolution adopted by the General Assembly 48/96: Standard Rules on the Equalization of Opportunities for Persons with Disabilities, adopted on the 25th of December 1993;
- Constitution of the Republic of Poland of the 2nd of April 1997 (Dz.U. 1997 item 483 as amended);
- Resolution of the Sejm of the Republic of Poland of the 1st of August 1997 – Charter on the Rights of Disabled Persons (M.P. 1997, no. 50, item 475);
- Act of the 27th of August 1997 on the professional and social rehabilitation and employment of disabled persons (Dz.U. 2019, no. 1172, as amended);
- Resolution ResAP(2001)1 on the introduction of the principles of universal design into the curricula of all occupations working on the built environment (‘Tomar Resolution’);
- Welfare Act of the 12th of March 2004 (Dz.U. no. 64, 2004, item 593 as amended);
- Convention on the Rights of Persons with Disabilities of the 13th of December 2006, ratified by Poland on the 6th of September 2012 (art. 9 CRPD, Dz.U., 2012, item 1169), hereinafter referred to as the ‘Convention’ (abbreviated as CRPD);
- Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: European

<sup>3</sup> Dośpiał-Borysiak K., *Polityka klimatyczna państwa. Norweska droga do zrównoważonego rozwoju*, Wydawnictwo Uniwersytetu Łódzkiego, 2018.

- Disability Strategy 2010-2020: A Renewed Commitment to a Barrier-Free Europe COM(2010) 636, final version, hereinafter referred to as ‘The European Strategy on Disabilities’;
- Act of the 19th of August 2011 on Sign Language and Other Means of Communication, Dz.U. 2017, item 182; Charter of Fundamental Rights of the European Union (OJEU C 326 of 26.10.2012, p. 391);
  - 2020 Human Capital Development Strategy (HCDS) adopted by the Council of Ministers (resolution no. 104 of the Council of Ministers of the 18th of June 2013);
  - Regulation (EU) no. 1303/2013 of the European Parliament and of the Council of the 17th of December 2013 laying down common provisions on the European Regional Development Fund, the European Social Fund, the Cohesion Fund, the European Agricultural Fund for Rural Development and the European Maritime and Fisheries Fund and laying down general provisions on the European Regional Development Fund, the European Social Fund, the Cohesion Fund and the European Maritime and Fisheries Fund and repealing Council Regulation (EC) No 1083/2006 (OJEU L 347 of 20.12.2013, p. 320, as amended), hereinafter referred to as the ‘general regulation’;
  - Commission Regulation (EU) No 1300/2014 of 18 November 2014 on the technical specifications for interoperability relating to accessibility of the Union's rail system for persons with disabilities and persons with reduced mobility (abbreviated as TSI-PRM);
  - Revitalization Act (Dz.U. 2015, item 1777);
  - Treaty on European Union (OJEU C 202 of 07.06.2016, p. 1);
  - Treaty on the Functioning of the European Union (OJEU C 202 of 07.06.2016, p.1);
  - Directive (EU) 2016/2102 of the European Parliament and of the Council of 26 October 2016 on the accessibility of the websites and mobile applications of public sector bodies;
  - Accessibility Plus 2018–2025 government programme of the 17th of July 2018 in action 13 Accessibility;
  - In curricula;
  - WCAG 2.1 accessibility standard (Web Content Accessibility Guidelines);
  - Act of the 4th of April 2019 on the accessibility of websites and mobile applications of public entities, (Dz.U. 2019, item 848);
  - Directive (EU) 2019/882 of the European Parliament and of the Council of 17 April 2019 on the accessibility requirements for products and services (European Accessibility Act, abbreviated as EAA) – <https://eur-lex.europa.eu/legal-content/PL/TXT/?uri=CELEX%3A32019L088>;
  - Regulation of the MSHE of the 18th of July 2019 on the standards of preparatory education for practicing the architectural profession (Dz.U. 2019, item 1359),
  - Act of the 19th of July 2019 on Providing Accessibility to Persons with Special Needs (Dz.U. 2019, item 1696).

Norway was the first European country to adopt the principles of universal design as a foundation of planning and design projects, which is why it is advisable to familiarize oneself with the principles of universal design on its example. In 1997, Norwegian specialists in the fields of architecture, spatial planning and industrial design associated with the Norwegian

National Disability Office, drafted a report that attempted to introduce the concept of universal design.<sup>4</sup>

Thinking and acting in the categories of universal design is widely spread and applied in Norway. It is defined as the design of products and the environment in a way so that they would be accessible to the greatest possible degree to all people, without the need for adaptation or specialist design.

One of the main goals of the universal design strategy is to promote equality and ensure the full participation of persons with difficulties in functioning by removing existing barriers and preventing new ones. While attaining general accessibility for disabled is possible using specialist solutions, the universal design principle states that fundamental actions and solutions will, by design, meet the needs of all users.

The ability to use all products by all community members and making space accessible to them should be treated as a starting point of design. They should be designed to allow use by persons of any age, any ability, skill and level of disability, while accounting for the use of personal technical aids, such as wheelchairs, hearing aids, etc. Factors associated with mobility, vision, hearing, cognition, as well as sensitivity to environmental factors (such as asthma or allergies) are very important in this context.<sup>5</sup>

Norway is a country where the idea of inclusive education, which is a matter of controversy in Poland, has been introduced since the 1970s. It is a country where segregation traditions are not rooted, and where special education schools have been phased out. The quality of all people is a highly-prized value (Aase, 2005, p. 13–17). The dominant Protestant religion facilitated the spread of education among all strata of society. Due to specific geographic features, Norway has no feudal history, which in many European countries has left its mark in the form of social classes and a deeply ingrained conviction of the superiority of some over others.

The 1976 reform introduced so-called adapted education, whose closest Polish equivalent is ‘individualized education’. It means acknowledging differences in the development of each student and respecting those differences by adapting curricula, methods and organization of the teaching process to the individual traits of every person. The goal of individualized education is the maximization of each student’s development potential regardless of their ability (Okoń, 1984, p. 104). Implementing adapted education would not be possible without changes to the core curriculum, as well as ensuring proper teaching facilities. The programme, which was the same for every school in Norway, was treated as a tool to equalize educational opportunity as every student, regardless of their social or geographic conditions, had access to the same education and, upon graduation, had the same knowledge base, at least in theory.

In the 1980s, in the face of the country’s increasing ethnic diversification as a result of migrant influx, it was decided that imposing a unified curriculum may cause the discrimination of certain minorities, and thus a reform was in 1987. The reform had curricula be adapted to local conditions and individual needs of every school (Nilsen, 2010, p. 489).

<sup>4</sup> Jurkowska A., *Idea projektowania uniwersalnego w planowaniu przestrzennym*, Architectus, 2002 1(11).

<sup>5</sup> Projektowanie uniwersalne w Norwegii, <https://naszesprawy.eu/projekty-programy/projektowanie-uniwersalne-w-norwegii/> (dostęp. 27.07.2022r.)

Furthermore, an emphasis was placed more on gaining social skills rather than theoretical knowledge (Hansen, 2005, p. 135).

The notion of child welfare refers to a subjectively experienced sense of happiness, wellbeing and satisfaction with a person’s life. The World Health Organization treats subjective wellbeing as an element of human health, a subjectively perceived satisfaction with the physical, psychological and social state of one’s life. In theory (Martin Seligman’s true happiness theory, Mihály Csíkszentmihályi’s engagement theory, Barbara Fredrickson’s broaden-and-build theory, and the onion theory of happiness by Janusz Czapiński<sup>6</sup>), as well as the findings of a study conducted in Finland, a child’s wellbeing depends on, among others, the quality of its surroundings. A child’s wellbeing positively affects its educational outcomes as a student, which is why it is so important to provide children with proper spaces. The four main pillars that comprise school-related wellbeing are: teaching conditions, interpersonal relations, means of self-actualization and health. Teaching conditions, associated with having, included: the school environment, the subjects taught and the form of teaching, group (class) size, lesson plan, safety, healthcare and school catering.<sup>7</sup>

## 2. Content introduced into each module

### 2.1. Interior design module as a part of Introduction to architectural and urban design

A residential or non-residential interior design assignment is featured in the Introduction to architectural and urban design course taught during the first year of the first-cycle architecture programme at the FoA CUT. This course will be enhanced with introductory content for the interior architecture design module to be taught during the second year of the first-cycle architecture programme at the FoA CUT. This content is to concern the assumptions of universal design and subject matter related to social integration. The objective is to make students aware of the diverse range of groups/people who function within society and their needs.

The field of architecture and urban planning is understood very broadly, as design interventions in the human environment and spaces where people live, work, travel and engage in recreation. Space designed in the spirit of universal design elevates the quality of life of all of its users. In the case of persons with disabilities or seniors, a space designed to be accessible ensures they can exercise basic human rights, the right to independence and self-determination. Space adapted to various age groups and people with different interests aids in their integration, which is especially important after a pandemic and a period of public isolation. Care for the state of public space is a duty of local governments, hence educational measures in each module should be implemented jointly with local government and community representatives. Targeting actual spatial problems faced by local communities will

<sup>6</sup> Krystyna Lubomirska, *Wybrane aspekty sprzyjające dobru dziecka*

<sup>7</sup> <https://szkoladlainnowatora.ceo.org.pl/wp-content/uploads/2021/03/dobrostan-przewodnik.pdf>



give the measures an applicative character. They will also benefit local governments that can identify spatial barriers present in a municipality.

Potential benefits to students that stem from the implementation of interior architecture design informed by universal design and various social groups can have the following potential benefits:

- It can raise awareness of the significance of the occupation in improving the lives of people with special needs,
- Familiarity with universal design terms and practical solutions (accessibility standards) and their implementation in actual spatial conditions,
- Mastering problem-solving techniques to increase the use potential of all buildings, accounting for diversity among people and their different needs, ability levels and interests,
- Gaining soft competencies such as the ability to consult ideas with clients and recipients (users) of design measures,
- Enhancing empathy and understanding of persons with special needs.

Module I classes featured in the architecture programme will be taught as a part of design courses during the semester 2 of the first-cycle programme (A.1-1. Introduction to architectural and urban design prof. dr hab. inż. Arch. Magdalena Jagiełło-Kowalczyk, dr hab. inż. Arch. Beata Malinowska-Petelenz) as:

1. Seminars:

- Presentation of groups suffering or under threat of suffering from social and digital exclusion.
- Subject matter concerning Universal Design and social integration

2. Practical classes:

- design workshops: Introduction to interior design while accounting for universal design and social integration
- students will prepare sketches, diagrams, models
- students present the effects of their work and discuss them
- it will be possible to prepare posters that present the course of the classes and the students' comments and impressions of them as an added value, as an element that promotes the idea of universal design and the idea of social integration.

## 2.2. Interior architecture design course curriculum

The Interior architecture design course was introduced into the programme curriculum to be taught during semester 3 of the second year of the first-cycle programme. The content introduced as a part of the course should include assumptions of designing interior spaces with respect for users and their needs (also in the context of persons with special needs, seniors and children), as well as respect for the environment. Design assignment subjects should pertain to the pursuit of inclusive spaces that facilitate integrating users with different levels of ability and different cultural backgrounds. Students who design common spaces for residents, students and pensioners will be sensitized to aspects of social inclusion. Attention to the quality of such spaces should manifest itself right from the design stage, through implementation and maintenance. In this context, apart from contact with nature that is necessary for human physical and psychological health, it is crucial to ensure low resource

consumption and high comfort of use in interiors, focusing on the good of the natural environment.

Potential benefits to students resulting from implementing interior architecture design into the curriculum while accounting for universal design principles and to various social groups include:

- Raising awareness of the significance of the occupation in building an inclusive society,
- Facilitating understanding of the dependencies and linkages between buildings and the state of the natural environment,
- Facilitating understanding of the dependencies and linkages between architectural and urban space and wellbeing,
- Ensuring familiarity with good practices in inclusive design and their implementation in actual spatial conditions,
- Mastery of design problem solving techniques with the intent to maximize potential use of all buildings and spaces, accounting for diversity among people and their different needs, levels of ability and interests,
- Gaining soft competencies such as teamwork skills and the ability to consult with client consultants and the recipients (users) of design measures,
- Enhancing empathy for and understanding of the needs of persons with special needs.

Classes included in module II taught as a part of the architecture in English programme will be taught as a part of design studio courses during semester 3 of the first-cycle programme (A.2-1 Interior Design, semester 3, A-3 P. Haupt) as:

1. Seminars:

- Functional layouts and flexibility in interior design.
- Presentation of interior design subject matter in the context of sustainable design while accounting for materials and utilities.
- Comfort and wellbeing – needs of different users, creative workspaces, rest and relaxation spaces (child welfare, work–life balance)
- Cultural determinants – design of inclusive learning, work and social integration environments.

2. Design classes:

- Design of an interior of integrative informal spaces associated with education, senior integration, student spaces, and people from different cultures.
- Students prepare sketches and diagrams
- Students present the results of their work and put them up for discussion.

### 2.3. Interior architecture design (second-cycle programme)

Alongside previously mentioned goals, which include:

- imparting the ability of correct interior functional arrangement,
- implementing the precepts of architectural and visual composition to achieve a specific interior character,
- identifying links between design theory and practice by using products available on

the market,

- treating interiors as an inseparable part of the sequence of perceiving architecture – the space around the building, the building’s massing, the space inside the building,
- the search for and study of elements of composition compliant with contemporary trends and leading technologies,

It is planned to incorporate subject matter associated with sustainable and inclusive design. The subject of the design assignment will be common spaces inside, public, commercial or residential buildings that aid in intergenerational and intercultural integration with educational features, designed using sustainable design solutions.

#### **2.4. Social and cultural aspects in interior design – Diploma design (first- and second-cycle programmes)**

As a part of Diploma design courses for both the first- and second-cycle programmes, it is proposed to optionally enhance thesis design projects to include interior designs that would account for the precepts of universal design and social integration. In thesis designs, a greater emphasis will be placed on social and cultural aspects in interior design. This way, students will be able to use their knowledge and abilities in interior design that is imparted to them as a part of Module II. Academic teachers of the Interior Architecture course are planned to be present during thesis design defences. The thesis design projects will be supervised in cooperation with institutions, local government organizations or domestic and foreign research and academic facilities, to whom matters of interior design are a problem that requires theoretical and design solutions.

### **3. Cracow University of Technology architecture programme teaching concept**

#### **3.1. State for the academic year 2021/22 in compliance with architecture programme standards**

At present, elements of interior design are introduced as a part of the Introduction to architectural and urban design module and during the *Interior architecture* course during the second year. It is proposed to enhance Diploma design courses both for first- and second-cycle programmes with an interior design that would be based on the precepts of inclusive design and conform to the principles of sustainable design.

The second-cycle programme features the elective course Interior architecture design, which is a continuation *Interior architecture design*. This course is taught in Polish and students who have not familiarized themselves with inclusive design during the second year will be able to train their skills during this course. During second-cycle thesis design projects, a greater emphasis will be placed on social and cultural aspects in interior design. Thus, students will be able to use knowledge and skills in interior design that they have gained via Module II.

### 3.1.1. Overview of the Interior design module for the first year of the first-cycle programme

During the first year of the first-cycle Architecture programme, as a part of the Introduction to architectural and urban design, students are given an assignment that has them design an architectural interior which, depending on group, can be a residential or non-residential interior. The assignment is done during the second semester.

Assignment: preparation of an interior design while accounting for functional-spatial matters, design of the interior layout, use of furnishing elements (lighting fixtures, furniture, glazing, etc.), design of a pavilion building.

Subject:

‘ARCHITECTURAL INTERIOR’

OBJECTIVE:

- developing the ability to correctly plan an interior’s functional arrangement
- application of architectural and visual composition principles with the aim of creating a specific interior character
- highlighting of links between theory and practice by using high-quality contemporary design products available on the market and in the process giving the planned interior its unique character
- search for and study of elements of composition that are aligned with contemporary trends and leading technologies
- creative use of a work of visual art as an inspiration for an architectural design

SUBJECT 1: Exhibition PAVILION with a small gastronomic establishment and restrooms

The subject of the design assignment is the functional-spatial design of an architectural interior of a pavilion, along with its illumination, in combination with its entrance zone, garden, public space, street furnishing and vegetation.

The object of the assignment is the interior of a pavilion used either as an exhibition space, an information point, or that is to stimulate activity in its surrounding space.

The student is to:

1. Respond to the compositional layout included in the subject.
2. Propose an interesting spatial solution.
3. Pay specific attention to the correctness of functional linkages and appropriate space floor areas, the size of circulation paths and the dimensions and placement of sanitary equipment and furniture, the placement of ventilation and utility shafts, as well as relations between the interior and external space.
4. Pay specific attention to the role of the interior’s furnishings and its illumination.
5. Also: Propose an interior inspired by a work of art.

The design should be presented on a maximum of four 50x70 cm sheets in a vertical layout. The drawing technique is left at the student’s discretion, but it should be legible and allow for an unambiguous reading of the design. The substantive content of the project should be compliant with the description below:

The project presentation should include:

1. A written section (in the form of a separate document):
  - an overview of the object of the design,
  - a concise description of the idea behind the design.
2. A mandatory graphical section:
  - with legible information about original architectural idea behind the design, which is to be original, and present the spatial context,
  - basic floor plan of the pavilion drawn up to a scale of 1:100
  - a floor plan of a selected interior drawn up to a scale of either 1:20, 1:25 or 1:50 (depending on the interior's specificity)
  - at least one cross-section with a view showing the development of the interior's walls, drawn up to a scale of either 1:20, 1:25 or 1:50.
  - optional: a diagrammatic presentation of the interior in the building to display its relations with the external zone, ceiling plan.
  - spatial representation: axonometric or perspective drawing displaying light, shadow and colour effects,
3. In an additional graphical section:
  - at least one drawing should depict a legible diagram of the use of daylight, the interior furnishing elements used, drywall and suspended ceiling systems and architectural glazing.
  - a description of the illumination of the interior and the external zone, the furnishing or the glazing used in the design
  - a list of interior furnishing or architectural glazing elements used.
  - identification of the art. Work that was used as an inspiration for the design, with an original image of the work along with information about its author, year of production and a reference from where it was sourced.

## SUBJECT 2: DWELLING

The subject of the design assignment is a spatio-functional arrangement of the interior of an apartment or a part of a house in a set relation of external elements and cardinal directions, daylighting, external transport layout, utility shafts and structural system.

The student is to:

1. Respond to the compositional layout included in the subject.
2. Propose an interesting spatial solution.
3. Pay specific attention to the correctness of functional linkages and appropriate space floor areas, the size of circulation paths and the dimensions and placement of sanitary equipment and furniture, the placement of ventilation and utility shafts, as well as relations between the interior and external space.
4. Pay specific attention to the role of the interior's furnishings and its illumination.
5. Also: Propose an interior inspired by a work of art.

The design should be presented on a maximum of four 50x70 cm sheets in a vertical layout. The drawing technique is left at the student's discretion, but it should be legible and allow for an unambiguous reading of the design. The substantive content of the project should be

compliant with the description below:

The project presentation should include:

1. A written section (in the form of a separate document):

- an overview of the object of the design,
- a concise description of the idea behind the design.

2. A mandatory graphical section:

- with legible information about original architectural idea behind the design, which is to be original, and present the spatial context,
- a floor plan of the interior drawn up to a scale of 1:25
- two cross-sections along with views of walls as designed, drawn up to a scale of 1:25
- Perspective views of the interior (one main view and supplementary views).

3. In an additional graphical section:

- at least one drawing should depict a legible diagram of the use of daylight, the interior furnishing elements used, drywall and suspended ceiling systems and architectural glazing.
- a description of the illumination of the interior and the external zone, the furnishing or the glazing used in the design
- a list of interior furnishing or architectural glazing elements used.
- identification of the art. Work that was used as an inspiration for the design, with an original image of the work along with information about its author, year of production and a reference from where it was sourced.

### 3.1.2. Overview of the Interior design course for the second year of the first-cycle programme

Architecture programme, third semester, second year, first-cycle programme, Architectural and urban design I and Interior design, integrated with the Rural design and Specialist design – Rural area revitalization.

#### OBJECTIVE OF THE INTERIOR DESIGN COURSE

The objective of the course is to develop students' abilities in:

- Interior architecture design,
- Building and composing an architectural interior,
- Selecting and pairing finishing materials,
- Designing and populating a space using furnishing elements such as furniture or lighting fixtures,
- Performing an analysis of the individual needs of the space's users
- Creating architectural interior design proposals by creatively reading its determinants and enhancing abilities in presenting a design in a form that is compliant with its content and meaning,
- Developing an interior architecture design by enhancing an architect's professional toolkit, especially in terms of enhancing the ability to establish proper relations between a house and its environment.

**INTERIOR DESIGN** The subject of the assignment is the design of a detached house in a rural landscape, with a particular emphasis on functional linkages between the spaces inside the housing unit, between the interior, and the surroundings (with an entrance zone and garden), as well as visual linkages between the interior and the surroundings (views, openings, vista terminations). Interior selection – The goal of the assignment is to prepare an interior design of the day section of the house under design, namely the living room with a dining room and kitchen,\* the night section (bedroom, wardrobe, bathroom), a home office with a restroom, or other section subject to the approval of the instructor. \*Under the condition that the design features these as a single space. If any of these uses is in a separate space, the design should include a part of the living room with uses incorporated into its space. Architectural composition of the interior – the composition of the interior should be characterized by:

- A design proposal that is original,
- Accounting for the link between the interior and the surroundings – the garden, nearby buildings and the landscape,
- The correct use of stylistic means used in an interior – focal points of the composition against a background,
- A well-thought-out colour scheme based on colour sets,
- Correct illumination of the interior and composition al effects resulting from using light as one of the building blocks of the interior, understood as both daylight and artificial illumination.

#### Atmosphere

The student should display the ability to create an atmosphere in the interior and record it in the form of a mood board. This expression may be either static or dynamic but should always be aligned with the designer’s intent and the needs associated with the use of a space/group of spaces.

#### Finishing materials and furnishings

The selection of textures and colours of each plane and furnishing element (furniture, light fixture, etc.) of the interior should correspond to the architectural character of the entire building. It should also be based on established ergonomics principles and knowledge of their impact on human wellbeing. Finishing materials, furnishing, and light fixtures should be selected from commercially available products. It is recommended to use AGC architectural glazing products, Weber wall finishes, Vitra furniture and Fagerhult lighting fixtures.

#### Technical solutions

Surface finishes should be proposed and described, along with the mounting of fixed elements, light fixture and electric socket (or other power source) should be proposed, and the location of other utility outlets should also be specified.

#### SCOPE OF THE PROJECT AND INTERIOR DESIGN

An interior design that includes: the design of a selected group of spaces approved by the instructor, which includes:

- Floor plans (of all stories), distinctive cross sections, elevations – drawn up to a scale of 1:25,

- a flipped ceiling plan – drawn up to a scale of 1:25,
- development of all walls – showing finishing details in cross-section and view – drawn up to a scale of 1:25,
- perspective sketches and/or visualizations of the building’s interior that also show its relationship with the surroundings.

### 3.1.3. First-cycle programme Diploma design course

Since 01.10.2020, the following scope of the diploma thesis design has been in effect at the CUT FoA:<sup>8</sup>

- The Diploma thesis design consists of a graphical section and a written section,
- Diploma thesis designs of buildings should include presentations of solutions that display a student’s familiarity with matters of contemporary engineering and construction technology as well as construction law, and in this respect the following requirements must be met:
  - 1) One or more design sheet should include construction drawings of selected fragments of a building drawn up to a suitable scale, as well as technical detail solutions. The minimum scope is a vertical cross-section of the building’s external wall in a distinctive place in the building, drawn up to a scale of 1:20, as well as a floor plan of a significant fragment of the building, drawn up to a scale of 1:50,
  - 2) The Bachelor’s diploma thesis design should be drafted in compliance with the Regulation of the Minister of Transport, Construction and Marine Management of 25 April 2012 on the detailed scope and form of technical designs (Dz.U. 2018, item 1935), hereinafter referred to as the ‘regulation’,
  - 3) The written section of the diploma thesis design should comply with the regulation’s requirements in a scope approved with the supervisor,
  - 4) The site plan and its written description should comply with the regulation in a scope approved with the supervisor.
- Diploma thesis designs concerning urban design problems should include presentations of solutions that display a student’s familiarity with subject matter of contemporary urban planning and familiarity with contemporary engineering and construction technology as well as knowledge of construction law, and in this respect the following requirements are to be met:
  - 1) The graphical section of the Bachelor’s diploma thesis design, and specifically the site plan of a selected fragment of the design, should comply with the regulation in a scope approved with the supervisor,
  - 2) A selected fragment of the design proposal should be developed and drawn up to a scale and level of detail compliant with the regulation,
  - 3) The written section of the diploma thesis design should comply with the requirements of the regulation in a scope approved with the supervisor.
- The candidate is obligated to be familiar with and apply standards concerning the graphical presentation of design documentation as stipulated in relevant regulations.

<sup>8</sup> According to appendix 2 to Senate resolution no. 34/d/04/2020 of 22 April 2020



9. The written section of the diploma thesis design should present the idea behind the design and design solutions.

### 3.1.4. Overview of the *Interior architecture design* elective course

The subject of the design assignment is a functio-spatial arrangement of a selected architectural interior combined with an entrance zone, garden, a public space, street furniture and vegetation.

The subject of the assignment is the entrance hall to a building (the following can be selected):

- a) An entrance hall to a service or public interior: a gallery (displaying artwork or applied art), or a small mixed-use space (theatre, cinema, lecture, etc.), an exclusive retail establishment,
- b) An office interior belonging to either one or multiple companies, potentially a co-working space.
- c) A residential building with apartments;  
or an interior
- d) Of a pavilion in a public space – a square or a park.

The entrance zone can take on the form of an internal courtyard (apio), and can be equipped with an internal, roofed garden, or it can be under an open sky. All subjects should include a reception desk and restrooms, as well as a cloakroom (the form should be adapted to the interior's use). The design should be drawn up to a scale of 1:100.

The student is to:

Respond to the compositional layout included in the subject.

Propose an interesting spatial solution.

Pay specific attention to the correctness of functional linkages and proper indoor space floor areas, the size of circulation paths and the dimensions and placement of sanitary fixtures and furniture, the placement of ventilation and utility shafts, as well as relations between the interior and external space.

Specific attention should be paid to the role of furnishing elements in the interior and its illumination, using selected commercially available products (Vitra furniture, natural lighting or AGC glazing).

The student is to design artificial illumination (symbols of light fixtures without lamp type selection, or using artificial lighting fixtures by a specific manufacturer, in which case a catalogue sheet is to be attached).

The design is to be consulted online.

The design is to be presented on 50x70 cm sheets in a vertical layout. The assignment is to be presented on no more than two sheets presenting the interior's functio-spatial design proposal and at least one additional sheet. Separate sheets should present in detail one of the selected problems: lighting elements, furnishing, architectural glazing, sustainable or multimedia elements used. The presentation technique is at the student's discretion, but it should be legible and allow for an unambiguous reading of the design. The substantive content of the

design should comply with the following description:

The project presentation should include:

1. In the written section (included on the sheets or in the form of a separate document):
  - Specification of the object of the assignment,
  - Programmatic data,
  - A concise overview of the idea behind the design.
2. In the essential graphical section (functio-spatial design proposal, 2 sheets maximum):
  - Legible information about the original architectural idea behind the design and presenting the spatial context,
  - A floor plan drawn up to a scale of 1:100 (depending on the subject chosen),
  - At least one cross section with a view showing the development of the interior’s walls, drawn up to a scale of 1:100,
  - A selected fragment of the floor plan or view that reflects the interior’s character, drawn up to a scale of 1:25,
  - Optional: schematic presentation of the location of the interior inside the building to illustrate its relationship with the external zone, ceiling plan.
3. In the additional graphical section:
  - Spatial presentation: axonometric or perspective views showing lighting (colour) effects obtained using the illumination design,
  - At least one drawing should legibly present the type of illumination, the interior furnishing or architectural glazing,
  - A description of the interior and the external zone or the glazing used in the design,
  - A list of furnishing elements or architectural glazing used in the design,
  - A description of technical solutions concerning material, multimedia and control technologies used.

### **3.1.5. Overview of second-cycle Diploma design (seminar and thesis design)**

Since 01.10.2020 the following diploma thesis design scope has been in force at the CUT FoA:<sup>9</sup>

- The diploma design thesis consists of a graphical section and a written section. Students are to solve both a theoretical and a design a problem.
  - Diploma thesis designs for buildings and heritage conservation should include a presentation of solutions that display a familiarity with problems of contemporary engineering and construction technology, heritage conservation for projects associated with it and a familiarity with construction law and here the following requirements are to be met:
    - 1) One or more sheets should present construction drawings of selected fragments of the building drawn up to a suitable scale and the solutions of technical details. The

<sup>9</sup> According to appendix 2 to Senate resolution no. 34/d/04/2020 of 22 April 2020

- minimum scope is a vertical cross section of the building’s external wall in a distinctive place, drawn up to a scale of 1:20,
- 2) The written section of the diploma thesis design should comply with the Regulation of the Minister of Transport, Construction and Maritime Management of 25 April 2012 on the detailed scope and form of technical designs (Dz.U. 2018, item 1935), hereinafter referred to as the ‘regulation’,
  - 3) The site plan and its written documentation should be compliant with the regulation
    - For diploma design theses focusing on urban and spatial planning, solutions mentioned in section 5 correspond to urban design details presented in suitable scales.
    - The written section of the diploma thesis design should present the idea behind the design and design solutions, and should specifically include:
      - 1) An academic essay on a subject associated with the design problem, whose detailed scope is consulted with and approved by the supervisor,
      - 2) A concise overview of the idea behind the design,
      - 3) An analysis of the site, its spatial determinants and others – depending on the thesis design subject,
      - 4) The technical documentation section of the thesis design, compliant with the abovementioned requirements,
      - 5) All thesis design sheets resized to an A4 format.

### 3.1.6. Extracurricular activity – *Interior – Light – Shadow* competition

Extracurricular activity includes student workshops organized by Student Academic Clubs, whose subjects also include matters of interior design. Furthermore, an interior design competition has been organized at the Cracow University of Technology for 13 years and offers a supplementation of regular classes and offers additional opportunities, for instance by offering additional consultations to students enrolled in architecture and interior architecture programmes.

The objective of the competition is to highlight links between theory and practice by using commercially available contemporary high-quality design products in giving an interior a unique character. Underscoring the significance of a perspective of the interior design as a comprehensive whole, beginning with its spatial form, material and colour, as well as lighting effects and conditions and furnishing. Examples of design will be presented not only as functionally necessary elements, but also as applied art that supplements, intrigues, inspires and enhances an interior.

The object of the competition is a design of a residential or non-residential interior in which daylight plays a significant role and which meets at least one of the following requirements: the design is inspired by a work of art selected by the student, Vitra furniture was used, architectural glazing by AGC was used, lighting fixtures by Fargerhult were used, drywall and suspended ceiling solutions by Rigips were used. Art is an important part of our lives and often an inseparable part of the space in which we are present. The work of an architect or interior designer is often strongly tied with the use of artworks or with direct cooperation with artists. We encourage the use of an artwork as an inspiration to creatively design a unique

interior. The work can be used as an inspiration to create a form, illumination, colour scheme, or build a general atmosphere of the interior. Designs prepared as a result of inspirations with an existing work of art must include original creative elements developed by competition participants.

Open formula – the jury selects entries by students of faculties of architecture and faculties of interior design, as well as faculties that offer similar programmes that apply for participation in the competition.

Assessment criteria: originality of the response to the leading theme, the use of architectural and visual composition principles to attain a planned interior character, the ability to correctly and functionally arrange an interior, treatment of the interior as an inseparable part of the sequence of perceiving architecture: the space around the building, the building’s massing, the space inside the building, highlighting links between theory and practice by the use of commercially available contemporary high-quality design products in creating the interior’s unique character, creative use of visual arts for inspiration for architectural design, the application of compositional elements aligned with contemporary trends and leading technologies.

### **3.2. Proposal of pilot changes (2022/23 academic year) compliant with standards for the architecture programme**

The proposed changes to the module taught during the second semester of the first year are to enhance the interior design assignment by:

- Introducing elements of universal design,
- Introducing subject matter associated with social integration,
- Hosting a seminar as a part of design studio classes that would include: a presentation of persons who are either excluded or under threat of social and digital exclusion, universal design and social integration,
- Conducting a design workshop as a part of design studio classes, which would include: an introduction to interior design that accounts for universal design and social integration, during which students prepare thematic sketches, diagrams, models and present the effects of their work and put them up for discussion,
- Posters that present the course of the classes, comments and impressions of the student can be prepared, serving as an added value and an element of exhibitions that promote interior design, the idea of universal design and social integration.

The changes proposed in the pilot project assume the introduction of an interior design pilot course to the second year of the first-cycle programme, whose theme would feature inclusive design targeting users of varying age, level of ability and different cultural background (universal design, child welfare, multiculturalism). Apart from the workshop-form universal design module, students will be familiarized via seminars with matters such as: interior design in the context of sustainable design, including material and utility solutions, comfort and wellbeing – the needs of different users, creative workspaces, spaces for rest and relaxation (child welfare, work–life balance) cultural determinants – the design of inclusive learning, working and social integration environments.

By designing common spaces for residents, students or pensioners, students will be sensitized to aspects of social inclusion. Attention to the quality of such a space should begin during the design stage and continue through construction and maintenance. In this context, apart from contact with nature that is necessary for human physical and psychological wellbeing, it is necessary to ensure low resource consumption in maintaining comfort of use of the interiors with care for the natural environment.

As a part of the Interior architecture design elective course, it is proposed to incorporate the subject matter of sustainable and inclusive design. The object of the design assignment will be a common space in a public, commercial or residential building, used for intergenerational and cultural integration, with educational value, constructed using sustainable design solutions.

The proposed changes to the module as a part of both first- and second-cycle programme Diploma design courses will be based on an optional enhancement of the diploma thesis design to include an interior design that would account for the principles of universal design and face challenges of social integration.

### 3.3. Planned results, guidelines for developing additional curricula

The project's planned result will be the following:

- A modification of the concept of teaching of the architecture programme,
- Preparation and pilot conduct of design studio courses,
- Testing of the concept of teaching during the 2022/2023 academic year.

Classes with the modified interior architecture modules will be conducted as a part of the following classes:

First-cycle programme

First year

A.1-1 Introduction to architectural and urban design (prof. dr hab. inż. arch. Magdalena Jagiełło-Kowalczyk, dr hab. inż. arch. Beata Malinowska-Petelenz, prof. PK)

Second year

A.2-1 Interior design (dr hab. inż. arch. Patrycja Haupt, prof. PK)

Second-cycle programme

Diploma semesters (optionally) prof. dr hab. inż. arch. Magdalena Jagiełło-Kowalczyk, dr hab. inż. arch. Beata Malinowska-Petelenz, prof. PK, dr hab. inż. arch. Patrycja Haupt, prof. PK):

E-1 Diploma design

E-2 Diploma seminar

Guidelines for the preparation of successive curricula:

It is recommended for interior design to include the following content:

- Functional layout and flexibility in interior design,
- Presenting interior design in the context of sustainable design, including material and utility problems,
- Comfort and wellbeing – the needs of various users, spaces for creative work, spaces for rest

- and relaxation (child welfare, work–life balance),
- Cultural determinants – design of inclusive environments for studying, work and social integration;

and impart the following to students:

- An awareness of the significance of the profession in building an inclusive society,
- An understanding of dependencies and links between architectural and urban space and wellbeing,
- A familiarity with good practices in inclusive design and their application in real-world spatial conditions,
- Mastery of design problem-solving techniques to enhance the potential of the use of all buildings, accounting for diversity among people, their different needs, levels of ability and interests,
- Soft competencies such as teamwork skills, consulting with a client consultant and the recipient (user) of design measures,
- Enhanced empathy and an understanding of the needs of persons with special needs.

#### 4. Teaching outcomes for the first-cycle Architecture programme at the Cracow University of Technology

##### 4.1. Curriculum and teaching outcomes in force since the 2021/2022 academic year

Teaching architecture programmes at Polish universities is assessed in terms of compliance with the regulation of the Minister of Science and Higher Education of 18 July 2019 on the standard of teaching in preparation for the occupation of architect. Any curriculum changes for this programme are intended to ensure full compliance with the guidelines of this document, outlined below.

Faculty of Architecture

Programme name: Architecture

Programme type: first-cycle, full-time

Programme profile: general academic

Field or fields of science and art: engineering sciences, art

Academic/artistic discipline with the percentage share of teaching outcomes for each discipline: leading discipline: architecture and urban planning – 91% other disciplines: civil engineering and transport – 4%; visual arts and artwork conservation – 5%.

Polish Qualifications Framework Level: 2

PROGRAMMATIC TEACHING OUTCOMES

In force for teaching cycles that begin in the 2020/2021 academic year onwards.

Content introduced as a part of the modification of the teaching concept concerning interior design will include the following teaching outcomes, in accordance with teaching standards

for the architecture programme:

KNOWLEDGE: THE GRADUATE KNOWS AND UNDERSTANDS

O.W2 the subject matter of architecture and urban planning in terms of solving simple design problems;

O.W3 the subject matter concerning architecture and urban planning useful in the design of buildings and urban complexes in the context of social, cultural, environmental, historical, economic, legal and other non-technical determinants of engineering activity, integrating knowledge gained during study;

A.W4 the principles of universal design, including the idea of designing generally accessible buildings and spaces, especially to people with disabilities, in architecture, urban planning and spatial planning, as well as principles of ergonomics, including ergonomic parameters necessary to ensure full functionality of space and buildings for all users, especially persons with disabilities.

B.W1 the theory of architecture and urban planning suitable in formulating and solving simple tasks in architectural and urban design as well as spatial planning;

B.W2 the history of architecture and urban planning, contemporary architecture, heritage conservation, to a degree necessary in architectural, urban planning and spatial planning practice;

B.W3 the significance of the natural environment in architectural design, urban planning and spatial planning;

B.W8 the role and application of graphics, drawing and painting and information technology in the process of architectural and urban design;

C.W1 the styles in art and the associated creative traditions and the process of producing artworks associated with architecture;

C.W2 the determinants of architectural and urban design stemming from human psychophysical capabilities;

E.W2 the subject matter of architecture and urban design useful in the design of buildings and urban complexes in the context of social, cultural, environmental, historical, economic, legal and other non-technical determinants of engineering activity, integrating knowledge gained during study;

E.W4 the subject matter of architecture and urban design in the context of the multi-specialization character of architectural and urban design and the need to cooperate with other specialists;

E.W5 principles of the professional presentation of architectural and urban design proposals.

ABILITIES: THE GRADUATE IS ABLE TO:

A.U1 design a building by creating and transforming space to give it new value – in accordance with the given programme that accounts for the requirements and needs of all users;

A.U5 think and act creatively, using technical abilities necessary to maintain and enhance abilities of producing artistic proposals in architectural and urban design;

- A.U6 integrate information from different sources, interpret them and critically analyse them;
- A.U7 communicate using various techniques and tools in the professional environment of architectural and urban design;
- A.U8 prepare technical documentation to suitable scales in reference to a conceptual design;
- A.U9 implement principles and guidelines of universal design in architecture, urban planning and spatial planning;
- B.U1 integrate knowledge from various fields of academia, e.g., history, history of architecture, history of art and conservation of cultural goods in solving engineering tasks;
- B.U2 perceive the significance of non-technical aspects and consequences of an architect’s design activity, including its impact on the cultural and natural environment;
- B.U3 use properly selected computer simulations, analyses and information technologies that support architectural and urban design;
- B.U6 properly apply standards and legal regulations in the field of architectural and urban design;
- D.U3 prepare elements of technical documentation, drawn up to proper scales, in cooperation with members of a design team;

#### SOCIAL COMPETENCIES: THE GRADUATE IS PREPARED FOR

- O.S1 adhering to the principles of professional ethics and raking responsibility for their actions;
- O.S2 respecting diversity of views and cultures and to display sensitivity to the social aspects of the profession;
- O.S3 taking responsibility for architectural and urban values in the preservation of the environment and cultural heritage;
- O.S4 learning throughout their entire life, including by engaging in a second-cycle or post-graduate programme, or participation in other forms of education,
- A.S1 thinking independently to solve simple design problems;
- A.S2 taking responsibility for shaping the natural environment and cultural landscape, including the preservation of the heritage of a given region, country, and Europe;
- B.S1 formulating opinions concerning achievements of architecture and urban design, their determinants and other aspects of an architect’s occupation, as well as conveying information and opinions;
- B.S2 reliable self-assessment, formulating constructive criticism concerning architectural and urban design activity;
- D.S1 adapting to new, changing circumstances that may appear while performing professional creative work;
- D.S2 properly defining priorities for actions intended to carry out specific tasks;
- E.S1 effectively using imagination, intuition, a creative stance, independent thought and creative work to solve design problems;
- E.S2 accepting critique of their own solutions and responding to it in a clear and matter-of-fact manner;



E.S3 using information technologies to integrate with other project and process participants, including presenting and conveying opinions in an understandable manner;

#### **4.2. Planned modifications to curriculum content and teaching outcomes after the pilot programme**

**It is planned to ensure full compliance between selected design studio courses with teaching outcomes:**

A.W4 the principles of universal design, including the idea of designing generally accessible buildings and spaces, especially to people with disabilities, in architecture, urban planning and spatial planning, as well as principles of ergonomics, including ergonomic parameters necessary to ensure full functionality of space and buildings for all users, especially persons with disabilities.

A.U9 implement principles and guidelines of universal design in architecture, urban planning and spatial planning.

#### **4.3. Compliance of planned changes with standards**

**Bringing all design courses to full compliance with teaching outcomes is assumed:**

Teaching outcomes on which the universal design modules are based are compliant with current standards for architecture programmes.

A.W4 the principles of universal design, including the idea of designing generally accessible buildings and spaces, especially to people with disabilities, in architecture, urban planning and spatial planning, as well as principles of ergonomics, including ergonomic parameters necessary to ensure full functionality of space and buildings for all users, especially persons with disabilities.

A.U9 implement principles and guidelines of universal design in architecture, urban planning and spatial planning.

### **5. Research into interior design**

#### **5.1. Research previously conducted at the CUT in the discipline of architecture and urban planning**

**External projects on interior design and universal design carried out at the Faculty of Architecture:**

Accessibility hub – centre for practical accessibility education (project head – dr hab. inż. arch. Patrycja Haupt, prof. PK, design team: dr inż. arch. Paweł Tor, dr inż. arch. Piotr Broniewicz, CHE teaching staff).

The overarching goal of the project is to create and support the functioning of a knowledge centre for accessibility, as a facility that would support the application and proliferation of universal design principles in university-level education by:

- Offering organizational support in establishing and operating the centre;
- Proliferating the principles of universal design;
- Enhancing university staff competence in universal design principles;
- Supporting universities in education and training in universal design using knowledge and experience of leading experts from Polish and foreign universities;
- Supporting universities in conducting projects in cooperation with the socio-economic environment and training operations in terms of improving access to spaces, buildings, products and services for persons with disabilities, including the principles of universal design;
- Initiating cooperation with university socio-economic environments to develop innovative products and standards for general services based on universal design principles.

Curriculum updates – universal design modules (Patrycja Haupt – project head, dr inż. arch. Paulina Tota, dr inż. arch. Anna Staniewska)

The main goal of the project is to develop and implement, as a part of university curricula, obligatory classes that include universal design, in compliance with the objective of POWER, which is to answer the needs of employment reforms, social inclusion, education, higher education, healthcare and good management, while also offering direct support in areas where national-level support is justified by objective considerations.

The project will include the development and implementation of mandatory classes that will include universal design, to be included in architecture, landscape architecture and spatial management curricula (first- and/or second-cycle programmes or long-cycle Master's programmes). Participation in the project is planned to give students an opportunity to learn the means of applying universal design principles. University programme curricula will be based on class models developed by the team in charge of developing universal design models. The genesis of the term universal design points to seven principles one should follow to design generally accessible built environments, products and services.

1. Motor and sensory path – The motor and sensory path project, submitted as a part of the Lesser Poland Social Innovation Incubator, subject: care services for dependent persons, carried out by an interdisciplinary team: project head: dr inż. arch. Patrycja Haupt, experts: mgr Małgorzata Rekuć – biology, dr inż. arch. Elżbieta Kusińska water in urban spaces, mgr inż. arch. Ida Mikołajska sensory spaces, mgr Barbara Skalna – physiotherapy, mgr Zuzanna Furlaga psychology, mgr inż. Łukasz Gajewski information technology.

The idea behind the motor and sensory path project is to create a space for training difficult situations in terms of mobility, which are as closest to natural as possible (e.g., in terms of atmospheric conditions), but that eliminates the stress caused by, among others, transport-related threats. Such activity should take place in neighbourhood spaces near one's place of residence, where training spaces can be arranged akin to playgrounds or open-air gyms. The project's implementation was based on creating a path model along with an application to support its use and was followed by testing the project's effectiveness in physical and psychological trials. An instruction effectiveness test was also performed. (2017/2018) funding received: PLN51,519.00.

2. Transport space – submitted as a part of the Lesser Poland Social Innovation Incubator, subject: subject: care services for dependent persons, carried out by an interdisciplinary team: project head: dr inż. arch. Patrycja Haupt, experts: mgr Alina Smyczek special education, mgr Małgorzata Rekuć – biology, dr inż. arch. Elżbieta Kusińska water in urban spaces, mgr inż. arch. Ida Mikołajska sensory spaces, mgr Barbara Skalna – physiotherapy, mgr Zuzanna Furlaga psychology, mgr inż. Łukasz Gajewski information technology.

The goal of the project is to design and test a design of a Transport space, an architectural model of the organization of a freely accessible green urban space that facilitates contact between seniors/persons with disabilities and fully able users (2018/2019). Funding received: PLN54,270.00.

**Prof. dr hab. inż. arch. Magdalena Jagiełło-Kowalczyk**

## 1. SELECTED ACADEMIC PUBLICATIONS:

1. Magdalena Jagiełło-Kowalczyk Smart Project w edukacji studentów architektury [in:] Środowisko mieszkaniowe. Housing environment 21/2017, ISSN 1731- 2442, PK, Kraków 2017,
2. Magdalena Jagiełło-Kowalczyk Social, Economic, Spatial and Construction – related Problems of Zwierzyniec. The Four Seasons [in:] Czasopismo techniczne, Politechnika Krakowska 2017
3. Magdalena Jagiełło-Kowalczyk Aspect of Environmental Protection in the Shaping of Sustainable Residential Developments according to their Users. Poland, the Netherlands, International Multidisciplinary Scientific Conference on Social Sciences and Arts SGEM 2017, Albena, Bułgaria, 2017, ISBN 978-619-7105-78-0, ISSN 2367-5659,
4. M. Jagiełło-Kowalczyk Role of International Student Workshops in the Process of Educating Architects – Integrated Energy Design. Conceptual design and the development of preliminary energy objectives Global Journal of Engineering Education WIETE 2016, v.19, n.3, Melbourne,
5. Magdalena Jagiełło-Kowalczyk, Ekologiczne osiedla mieszkaniowe. Determinanty eco-jakości chapter in a monograph Miejskie środowisko mieszkaniowe, Kraków, 2017, p. 253-266
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Patrycja Haupt – selected publications associated with the subject

1. The design of public space augmentations for encouraging activities conducive to social inclusion, prevention and rehabilitation / Patrycja Haupt, Barbara Skalna // International Journal of Psychosocial Rehabilitation [online]. – 2020, Vol. 24, Iss. 1, p. 9-17. – doi: 10.37200/IJPR/V24I1/PR200102. – ISSN 1475-7192 MSHE List: yes MSHE score: 20 Indexed in Scopus: yes type: article in a journal
2. Człowiek – nowe potrzeby, pragnienia, cele [online] / [ac. Ed. Patrycja Haupt, Elżbieta

Kusińska]; [authors: Maja Leszczyńska, Kamila Lorenc-Kozik, Robert Mazur, Agata Nowak, Barbara Skalna, Sebastian Śliwa, Monika Wiecha, Julia Woch, Marta Woźniak]. – Kraków: Katedra Kształtowania Środowiska Mieszkaniowego, 2019. – 110 p. – (ArchEco; 3). – ISBN 978-83-953573-2-9, Editor: Haupt, Patrycja, Kusińska, Elżbieta, MSHE score (editing): 20 type: book

3. Urban spaces in residential areas as an environment for continuous prevention and rehabilitation – design and benefits / Barbara Skalna, Patrycja Haupt // International Journal of Engineering and Advanced Technology [online]. – 2019, Vol. 8, Iss. 5S3, p. 327-331. – doi: 10.35940/ijeat.E1070.0785S319. – ISSN 2249-8958 MSHE List: yes MSHE score: 20 Indexed in Scopus: yes type: article in a journal

4. Backyard sensorimotor path. A new form of rehabilitation / Patrycja Haupt, Barbara Skalna // W: Ergonomics for people with disabilities : design for accessibility [online] / sci. eds. Aleksandra Polak-Sopińska, Jan Królikowski. – Warsaw : De Gruyter Open, 2018. – (Advances in Production Management and Ergonomics, ISSN 2544-7610 ; 1). – p. 101-114. – doi: 10.2478/9783110617832. – ISBN 978-3-11-061783-2 (e-book) MSHE score: 20 type: book chapter/fragment

5. Design with nature and design for the people – the principles of architectural education / Patrycja Haupt // World Transactions on Engineering and Technology Education [online]. – 2018, Vol. 16, No. 1, p. 70-74. – Conference proceedings.: 9<sup>th</sup> WIETE Annual Conference on Engineering and Technology Education, Bangkok, Thailand, 19-23.02.2018. – ISSN 1446-2257 Indexed in Scopus: yes type: conference proceedings in a journal

#### EXPERIENCE IN WORKING WITH CHILDREN AND SCHOOL YOUTH

1. Magdalena Jagiełło-Kowalczyk – Organization of a workshop for primary school children at the EKOCENTRUM ICPPC – International Coalition to Protect the Polish Countryside, Stryżów as a part of the International Congress „architecture + children, 7th Days of Autumn”, Kraków, 21-26.10.2007

2. Magdalena Jagiełło-Kowalczyk, Przemysław Markiewicz – workshop curriculum for an architectural curriculum for students of a high-school “architectural” class 2013, 2014, 2015, 2016, 2017

3. Magdalena Jagiełło-Kowalczyk, Przemysław Markiewicz – Organization of the Architecture through our eyes seminar for students of an “architectural” class, A. Witkowski High School V, 22.11.2013

4. Magdalena Jagiełło-Kowalczyk, Przemysław Markiewicz – Organization of a competition and workshop cycle Vacation village as a part of cooperation with the A. Witkowski High School V, 10.2013 – 06.2014

5. Magdalena Jagiełło-Kowalczyk, Przemysław Markiewicz – Organization of the Future housing architecture seminar for high school students, CUT Faculty of Architecture 17.01.2014

6. Magdalena Jagiełło-Kowalczyk, Konrad Loesch – Organization of 3D printing for high school students seminar and workshop, CUT Faculty of Architecture, 21.02.2014

7. Magdalena Jagiełło-Kowalczyk – Organization of the My school design workshop on the occasion of the 25th anniversary of the founding of the J. Piłsudski Social Primary School

No. 1 in Kraków, Kraków 04.10.2014

8. Magdalena Jagiełło-Kowalczyk, Przemysław Markiewicz – Preparation of the Student logo for the architectural class design workshop using ArchiCAD software, A. Witkowski High School V, Kraków, 12.12.2014

9. Magdalena Jagiełło-Kowalczyk, Przemysław Markiewicz – Organization of the My initials in space competition and workshop cycle as a part of cooperation with the A. Witkowski High School V in Kraków, 10.2014 – 06.2015

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11. Magdalena Jagiełło-Kowalczyk – Organization and operation of a design workshop for children with arthrogyriposis: Recreational space of Your dreams, Workshop as a part of the International Interdisciplinary Conference on the Comprehensive Treatment of Arthrogyriposis, Busko Zdrój 6-7.10.2016

12. Magdalena Jagiełło-Kowalczyk, Przemysław Markiewicz – Organization of the Faculty of Architecture Logo competition and workshop cycle as a part of cooperation with A. Witkowski High School V in Kraków, 10.2016 – 06.2017

13. Magdalena Jagiełło-Kowalczyk, Małgorzata Trojańska (UP) Organization of a workshop (meeting with persons with disabilities) at the Pedagogical University, Barrier-free design, 02.06.2017

14. Magdalena Jagiełło-Kowalczyk, – Organization and supervision of a workshop for primary school children as a part of the “Young Architects” – We Build module programme, Kraków 2018, 2019

15. Magdalena Jagiełło-Kowalczyk, – Organization and supervision of a workshop for primary school children as ap art of the “Engineering Masters Academy” programme, architecture section, Kraków 2019-2021

16. M. Jagiełło-Kowalczyk, Przemysław Markiewicz – Organization of a competition and a cycle of design workshops as a part of cooperation with A. Witkowski High School V in Kraków, 10.2017 – 06.2018

17. M. Jagiełło-Kowalczyk, Draft of the curriculum for the first thematic module entitled “We Build” as a part of the “Young Architects” programme, based on contract no. 4100 of 19.09.2018

18. M. Jagiełło-Kowalczyk, Przemysław Markiewicz – Organization of a competition and a cycle of design workshops as a part of cooperation with A. Witkowski High School V in Kraków, 10.2018 – 06.2019

19. Magdalena Jagiełło-Kowalczyk, Dominika Poluk – Organization of a cycle of design workshops for students of the GROW SSC – Proposal of an interior design of an attic space for students of High School V, in cooperation with the A. Witkowski High School V in Kraków, 10.2021–06.2022

20. Patrycja Haupt Drafting of the curriculum for thematic module 1 entitled “We Build” as ap art of the “Young Architects” programme, based on contract no. 4100 of 19.09.2018

21. Patrycja Haupt – Organization and supervision of a workshop for primary school children as a part of the “Young Architects” programme – the “We Visualize” module,

Kraków 2018, 2019

22. Patrycja Haupt – Organization and supervision of a workshop with primary school children as a part of the “Engineering Masters Academy” programme, Architecture section, Kraków 2019-2021

- Workshop with preschool children conducted at the Municipal Kindergarten 38 in Kraków (2013, 2014). Idea, substantive preparation and organization: dr inż. arch. Patrycja Haupt
- Workshop for school-age children conducted at Primary School 50 in Kraków (2014). Idea, substantive preparation and organization: dr inż. arch. Patrycja Haupt (50%), mgr inż. arch. Marta Grindel (50%).
- Design workshop for children from the Włodzimierz Tetmajer Primary School 50 in Kraków as a part of the Cracow University of Technology Open Days (2017), Idea, substantive preparation and organization: dr inż. arch. Patrycja Haupt (100%)
- Interdisciplinary workshop: Promotion of sustainable construction for municipal authorities, entrepreneurs, developers and owner-builders, researchers and students, Kraków, 10 November 2006 – organization: Patrycja Haupt (80%), Grażyna Schneider-Skalska (20%); conduct: Magdalena Jagiełło-Kowalczyk (20%), Jarosław Huebner (20%), Danuta Kupiec-Hyła (20%), Patrycja Haupt (20%), Grażyna Schneider-Skalska(20%).
- Workshop with residents conducted as a part of the Book booth project (2015). Substantive preparation, moderation: dr inż. arch. Patrycja Haupt (100%), organization and supervision: mgr Magdalena Wiechniak (40%), mgr inż. arch. Leszek Jasiński (10%), Office of the City of Kraków, dr inż. arch. Patrycja Haupt (30%), Sustainable Design scientific club under the supervision of dr hab. inż. arch. Justyna Kobylarczyk, prof. PK and dr inż. arch. Patrycja Haupt (10%), Cracow University of Technology

## 5.2. Conducted as a part of the project

Research papers in preparation as a result of the project:

1. Magdalena Jagiełło-Kowalczyk *Inspiracje dziedzictwem kulturowym w projektowaniu wnętrz* – planned publication in an academic journal, 100 MSHE score

The objective of the study presented in the paper was to determine the impact of natural and cultural heritage on interior design. The study was conducted as a part of the FRSE programme, Iceland, Liechtenstein, Norway grants (EOG/21/K4/W/0048W/0175). Heritage aspects taken into consideration in interior design in Norway were investigated, as heritage plays a leading role in this country’s development. Norwegian architectural interiors were analysed and assessed. The findings were compared with the situation in Poland. The conclusions were illustrated with interior designs presented by first-year students of the CUT FoA, which accounted for social inclusion inspired by nature and art.

2. Łukasz Tokarski *Nature, Heritage, People. The Phenomenon of Tyssedal* – planned publication in an academic journal, 100 MSHE score

The goal of the research presented in the paper was to diagnose the causes of perceiving Tyssedal – a town near a fjord in Norway – as attractive to tourists. The study was conducted



as a part of the FRSE programme, Iceland, Liechtenstein, Norway grants (EOG/21/K4/W/0048W/0175). The study investigated place-based features of the area, which were strongly linked to natural conditions and which affect the perception of its attractiveness. The attractiveness was investigated in a quantitative manner. The number of yearly visitors to Tyssedal was investigated. The conclusions were illustrated with Bachelor’s and Master’s thesis designs prepared by CUT FoA students.

Patrycja Haupt – *Wnętrze – miejsce spotkań kultur i pokoleń* – planned publication in an academic journal, 100 MSHE score

The objective of the study presented in the paper was to diagnose factors that affect the creation of an interior that aids in intergenerational and intercultural integration. The study was conducted as a part of the FRSE programme, Iceland, Liechtenstein, Norway grants (EOG/21/K4/W/0048W/0175). Exclusion factors were investigated and, by assessing elements of an interior’s composition, it was also determined which spatial factors contributed to building place-based identity and affect its activity. The conclusions were illustrated with designs prepared by CUT FoA students.

### 5.3. Use of research in teaching

The results of the research and staff experience will be used to create teaching materials. It is planned to prepare introductory presentations, seminars and e-learning materials. They will be created and supplemented as new experience is collected throughout the project and introduced into the content of the teaching concept. Some Industry 4.0 technologies are crucial to planning curricula and university infrastructure, especially in the case of technical universities, such as computer aided design and manufacturing (CAD/CAM), which supports the drafting of designs and working plans for products and production using computer systems. A simulation training system at universities is a form of organizing research that is directed towards the development of participants, cooperation and achieving results. Students operate in specially designed problem, training and developmental situations.

The traditional approach places a greater emphasis on the educational role of teaching, while the contemporary approach treats students as a priority. The current approach also offers a different perspective on the role of students and teachers. The traditional approach emphasizes conveying information, and teachers actively convey information to passive students. The contemporary approach focuses on students as active participants who engage critical thinking to make their own decisions instead of uncritically accepting information given to them by teachers. Learning becomes a bidirectional, and not a unidirectional process, and teaching is adapted to specific individual needs. Personalized teaching has become a rule and is necessary in contemporary education. Apart from individual learning, it is also necessary to use idea sharing and group learning strategies, where several people join to share their ideas among themselves. Ideas are then shared either individually or with a group of people to create a new product or service. This method is also used in the traditional approach, but the use of electronic technology allows for faster and quicker outcomes.

An overview of contemporary interactive design has been presented below:

- Participant-oriented,

- Learning as an active construction of knowledge,
- Learning styles are adapted to individual differences, pre-existing knowledge and skill levels,
- The application of group learning,
- The application of different types of classes and teaching methods,
- Goals set based on actual student needs,
- Teaching process is suitable for specific problems,

During class, projectors, screens, interactive blackboards, measuring devices and knowledge testing systems are used.

## 6. Graduate profile

### 6.1. Current gradual profile (in graduation studies curricula)

**GRADUATE QUALIFICATIONS** The graduate should possess knowledge of: history and theory of architecture and urban design, the fine arts, construction and construction technologies, structural systems, building physics and architectural and urban design. They should know technical regulations and methods of organizing and the course of the real estate development process. The graduate should possess the ability to collect information, shape the human environment in accordance with human utilitarian needs – accounting for the needs of persons with disabilities – and creating designs that meet aesthetic, utilitarian and technical requirements. The graduate should be familiar with the construction code, the economics and organization of the real estate development process and the organization of the design process both in Poland and in European Union Member States. The graduate should know a modern foreign language at a B2 proficiency level of the Common European Framework of Reference for Languages. The graduate is prepared for further education or work in compliance with recommendations.

### 6.2. Graduate profile after the implementation of the pilot project

The sensitized graduate

**GRADUATE QUALIFICATIONS** The graduate should possess knowledge of: history and theory of architecture and urban design, the fine arts, construction and construction technologies, structural systems, building physics and architectural and urban design. They should know technical regulations and methods of organizing and the course of the real estate development process. The graduate should possess the ability to collect information, shape the human environment in accordance with human utilitarian needs – accounting for various social groups and knowledge about diverse needs and know how to gain such knowledge (either directly from persons from these groups, while respecting their dignity, displaying openness and employing savoir vivre in contact with persons from excluded groups). The graduate should be familiar with the construction code, the economics and organization of the real estate development process and the organization of the design

process both in Poland and in European Union Member States. The graduate should know a modern foreign language at a B2 proficiency level of the Common European Framework of Reference for Languages.

The graduate profile, in the context of abilities, should also reference the Jenkins list. Professor Henry Jenkins lists 11 essential skills necessary to be successful in the twenty-first century:

Play – the capacity to experiment with one’s surroundings as a form of problem-solving;

Performance – the ability to adopt alternative identities for the purpose of improvisation and discovery;

Simulation – the ability to interpret and construct dynamic models of real world processes;

Appropriation – the ability to meaningfully sample and remix media content;

Multi-tasking – the ability to scan one's environment and shift focus onto salient details on an ad hoc basis;

Distributed cognition – the ability to interact meaningfully with tools that expand our mental capacities;

Collective intelligence – the ability to pool knowledge and compare notes with others towards a common goal;

Judgement – the ability to evaluate the reliability and credibility of different information sources;

Transmedia Navigation – the ability to deal with the flow of stories and information across multiple modalities;

Networking – the ability to search for, synthesize, and disseminate information;

Negotiation – the ability to travel across diverse communities, discerning and respecting multiple perspectives, and grasping and following alternative sets of norms.

This is linked with the development of communication competencies, e.g., the participant of the project: The participant actively listens to the statements of other participants during a discussion.

- Proposes a solution to the problem to the group,
- Formulates assertive messages,
- Defends their point of view in front of the group,
- Takes part in the discussion,
- Adheres to group rules during class,
- Refrains from criticizing other participants,
- Either entirely or partially changes their view under the influence of another’s arguments,
- Identifies types of social behaviours in a group,

- Accurately defines a problem,
- Structures interpersonal principles in terms of importance,
- Formulates probable hypotheses about the causes of problematic situations,
- Proposes their own solutions to problems.

Furthermore, the project participant should become familiar with work techniques

- Compare different training methods,
- Distinguish inference based on true and false evidence,
- Filter information from press articles,
- Select the potentially most effective strategy out of possible options,
- Assess the value of an idea based on the plus, minus, question mark method,
- Constructs a product prototype using Design Thinking,
- Describes observations of a product’s use by clients,
- Verifies hypotheses using social experiments,
- Plans application measures,
- Groups known methods using their own set of criteria.

In terms of social competencies, the graduate:

- Is ready to take on essential professional and social duties, their assessment and interpretation,
- Is prepared for independent action and cooperation with others in organized conditions, direct a small team in organized conditions,
- Is prepared to assess both their own actions and those of individuals and teams they direct;
- Is prepared to take responsibility for the consequences of these actions.

## 7. Recommendations concerning the employment market and professional career

### 7.1. Current (legally defined) accessibility of public institutions

First-cycle Architecture programme

An Architecture programme graduate may serve as ancillary staff in architectural and urban design companies; in construction companies, real estate development and management companies, in public administrative bodies and territorial government bodies.

The graduate is ready to:

- The graduate is ready to enrol in a second-cycle programme at level 7 of the EQF (Master’s) – the Faculty of Architecture of the Cracow University of Technology offers continuation of university education in the form of a second-cycle programme in Polish and English. The Faculty of Architecture of the Cracow University of Technology engages in multilateral cooperation with many foreign universities. It includes student and teaching staff exchanges, conducting joint research and the

organization of design workshops.

- Postgraduate programmes, including at the Faculty of Architecture of the Cracow University of Technology, e.g., Investigation and analysis of historical architecture, BIM – digital technologies in architecture and civil engineering, Conservation of architecture and urban-planning monuments, The conservation, architectural shaping and design of interiors of religious buildings. Spatial planning, revitalization of urban and rural settlement complexes, Greenery in historical layouts; – and other forms of education.

## 7.2. Post-project enhancement potential

Over the course of the project, students of the programmes mentioned will gain knowledge and abilities concerning universal design, which will enhance their competitiveness on the employment market and expand the group of potential employers. The graduate of a programme that included a universal design module in its curriculum will be able to work and cooperate in an informed and socially responsible way with, among others, major institutions and organizations that work towards the betterment of the situation of the disabled, such as the Government Representative in charge of Persons with Disabilities, the Disabled Persons Rehabilitation Fund, the Polish Society of Blind Persons, the Polish Society of Deaf Persons, the Polish Association for Disabled Sports, and nationwide and local associations that focus on the needs of persons with disabilities. Graduates who will go through a universal design module will be able to cooperate with these institutions in preparing and carrying out funding applications as a part of the European Regional Development Fund, the European Social Fund and the Cohesion Fund, from a perspective of antidiscrimination laws and supporting the participation of persons with disabilities in public and professional life.

Graduates who will go through a universal design module will also be able to work as accessibility coordinators at institutions (as stipulated in Art. 14 of the Accessibility Act) or at a certifying institution. Another possible career path for the graduate is work as an accessibility auditor (architectural, information, communication, procedural or digital accessibility) or an architect/designer/consultant specializing in accessibility – a person that coordinates the design process in terms of providing accessibility to persons either suffering from or endangered by exclusion.

The graduate will also be able to continue education via a postgraduate programme associated with universal design, such as: Accessibility to public institutions for persons with disabilities, which will influence the graduate’s professional development and attractiveness on the employment market.

Universal design is a strategy of creating products, environments, operating systems and services that friendly and useful to the largest possible group of people. Its key principles include simplicity, flexibility and effectiveness.

Originally developed in response to the needs of aging populations and persons with disabilities, universal design has a much broader application. It enhances ease of access to products, place and services to many diverse populations. The use of such design means that buildings, programmes and services account for a wide range of ability, age, reading proficiencies, learning styles, languages and cultures. Diversity brings experience, perspective

and stability to a workplace, and also means that employees and clients have more diverse needs and expectations. Universal design is a lens that can be used to look at every aspect of a company’s operations or as a set of tools that can enhance products, services, client satisfaction, or to attract and retain employees. UD in the workplace can be employed in areas focused on products, services, the physical environment, communication and technology.

Most people use UD cases in the physical environment every day. For instance, where once curbs had sharp inclines towards streets, they are now chamfered to that incline. ‘Flat curbs, as they are called, were initially designed for persons on wheelchairs, so that they could enter and exit pavements, but are routinely used to improve safety and the experience of persons with strollers and even bicycles!’

Universal design in circulation and transport means that circulation practices or systems in the workplace can be used by most candidates or staff. Let us take the hiring process. Application forms and tests before hiring can be available in different formats, including large print, which is useful not only for candidates with poor eyesight, but also older employees.

Technical equipment with universal design functionality can aid the employer in creating a friendly workplace. Manufacturers employ UD principles into their latest products, making it easier for companies to meet a diverse range of wishes and needs of their clients and workers. The use of these products can give employers a competitive edge – by increasing performance and attracting better talent that seeks opportunities to use the latest technologies.

## 8. Conclusions – shared

Climate and demographic change that has been happening for years before our eyes mean that we can be almost certain that the main trait shared by future generations will be various limitations in terms of mobility and perception. Thus, the matter of designing and creating spaces, products and services that will meet the needs of a changing society to the fullest extent becomes a crucial matter.

Adapting the environment of human life (spaces, products and services) to the needs of persons with various forms of disabilities – including seniors – is not a new subject: it has been globally discussed since the 1970s, while in Poland – since the mid-1990s. However, it was only during the last two years that the first general, systemic framework for long-term guidelines on investigating accessibility levels and their improvement was established.

The adaptation of the environment of human life is not only a matter of eliminating spatial barriers, but it is also a wider outlook. Influencing human comfort and wellbeing via designing architecture, including interiors, and supporting the growth of children via a proper environment that stimulates growth, including the design of spaces that support maintaining various levels of ability, should become a priority in education as a part of architecture programmes.

Experience in building accessibility in Poland and around the world shows that it is becoming a fact only when people truly want (and know how) to make the world around them reachable to all: accessibility ceases to be merely an obligation, a set of guidelines and recommendations, a vague and distant term (that concerns ‘them’, ‘those people’ or ‘a certain group’) and is beginning to be understandable, experienced, familiarized and used as an

objective (and tool) in everyday work. It becomes a habit and obviousness, instead of a difficult and (often) misunderstood requirement from an act of law.

By introducing subject matter concerning the diversity of groups/persons who function in society and knowledge about accessibility and means of ensuring it (lectures) and contact/meetings with persons with disabilities and the practical experience of specific limitations (seminars) it is possible to enhance not only the general knowledge of students, but also their empathy: in accordance with the assumption that people are different, their needs are different, and everyone is the best expert on their own (dis)ability.

## 9. Perspectives – trajectories in interior design and its teaching

Demographic and social change of an unprecedented character that can currently be noted are some of the most essential challenges of the contemporary economy. The previously unseen explosion of the global population, along with a rapid increase in average age and the number of persons with disabilities in society results in, among other things, the necessity to develop new teaching methods for accessibility. This demonstrates visible gaps in previous modes of teaching and gives a clear sign that the process of its construction is ongoing, and that meaningful action in this field must be planned and distributed over time.

Apart from teaching with the aim of achieving a barrier-free environment, we should prepare graduates to take action in the fields of:

- Ensuring proper conditions for the development of children,
- Creating an inclusive environment for the life of people from different cultures, with different views and also persons with disabilities, and in which the greatest number of people could feel comfortable,
- Ensuring psychological comfort by supporting creativity and maintaining work–life balance;
- Creating solutions that can maintain ability levels and independence of seniors and persons with disabilities.

Accessibility to persons with various disabilities is a process and all change for the better should be treated as a part of a larger whole: accessibility begins with an awareness of the disability of users – thus the emphasis placed in the design on matters associated with the needs of different groups. Continued cooperation and the participation of major stakeholders in the process of change builds awareness and motivates to take action, although it is not always possible to implement straight away. Some may take months and even years to materialize.

Having in mind the aforementioned need to spread efforts over time, the presented proposal of implementing a teaching concept, teaching outcomes and research activity, and recommendations concerning the employment market and professional career for first-cycle students at the Faculty of Architecture of the Cracow University of Technology has been created. Its main assumption is the belief in the necessity of equipping students not only with the required knowledge and abilities, but also encouraging them to independently pursue this knowledge and disseminate it.