

Detailed course description (SUBJECT CARD)

Course title: UNIVERSAL DESIGN AND ERGONOMICS (MODULE 3)

Course code: RAr-A-SSII-I-M3:UDE

Classification of a course group: B.1.

Course type: ~~basic / field-related / general / specialty-related*~~
obligatory / ~~elective*~~

Field of study: Architecture

Level of study: ~~first-cycle~~ / second-cycle*

Profile of study: general academic / ~~practical*~~

Mode of study: full-time programme / ~~part-time programme*~~

Specialty (specialisation):

Year of study: first

Semester: 1

Teaching modes and teaching hours:

Exercises (practical classes) – 15

Language/s of instruction: English

Number of ECTS credits (according to the study programme): 1

* – leave the appropriate option

1. Course objectives:

Module III: universal design with elements of ergonomics is dedicated to second-cycle students. The essence of Module III is an inclusive design, based on interdisciplinary education, which results in the acquisition of specific new knowledge which is combined from various fields within the scope of humanities related to creating equal opportunities for people with specific needs. The interdisciplinary approach is based on the cooperation of various professional groups which, by using knowledge related to their specific specializations, are able to find a better solution to a problem by working as a team.

The practical classes should ensure participation of the end users, i.e. all the users, including persons with different disabilities, the elderly and other persons with specific needs. The design tasks should address the specific individual or collective needs of persons with specific needs, including particularly persons with disabilities and persons from various age groups.

2. Relation of the field-related learning outcomes to modes of teaching and methods of verification as well as to assessment of student's learning outcomes:

symbol	assumed learning outcomes <i>a student who completed the course:</i>	teaching modes	verification methods and learning outcomes assessment
Knowledge: the student knows and understands			
E2A_Wo5	the relations between human being and architecture, between architecture and the environment, and necessity of adapting architecture to human needs and scale	practical classes	two short design exercises
Skills: the student can			
E2A_B.U04	formulate opinions as a critical analysis within the scope of architecture, as well as present and synthetically describe the basic ideas behind the design based on the assumptions made	practical classes	oral presentation
E2A_B.U06	prepare and present a presentation detailing the results of an engineering design task using various means of communication, including formulating it in a way which is commonly understandable	practical classes	oral presentation
Social competence: the student is ready			
E2A_B.S2	to formulate honest self-assessment, formulate constructive criticism related to architectural and urbanistic activities, as well as to accept criticism related to the solutions he/she presents, to respond to the criticism in a clear and matter-of-fact way, also using arguments referring to the available scientific achievements and using the criticism in a creative and constructive way	practical classes	oral presentation

3. The content of study programme ensuring learning outcomes (*according to the study programme*):

Students acquire the skill to apply the rules of universal design in practice and to diagnose accessibility both in public spaces and/or in designing residential spaces taking into account the individual and collective needs of the elderly and persons with disabilities. The implementation of projects aims to create new solutions to meet the needs of users that change over time. Another important issue is acquiring teamwork skills and conducting the design process with participation of the end users of the proposed spatial solutions.

4. Description of methods of determination of ECTS credits:

Type of activity	Number of hours / ECTS credits
Number of course hours regardless of a teaching mode	15 / 0,5
Student's workload - preparing presentation	15 / 0,5
Total hours:	30
Number of ECTS credits allocated to a course	1

Explanation:

* – student's workload - fill in the types of activities, e.g. *preparation for a course, interpretation of results, making a course report, preparation for an exam, studying sources, making a project, presentation and report, doing written assignment, etc.*

** – the other e.g. *extra course hours*

5. Summary indexes:

- number of course hours and ECTS credits at the course with a direct participation of academic teachers or other persons running the course and supervising students: **15h / 0,5 ECTS**
- number of course hours and ECTS credits at the course related to the scientific activity conducted at the Silesian University of Technology in a discipline or in disciplines to which a field of study is assigned - in the case of studies with a general academic profile; **15h / 0,5 ECTS**
- number of course hours and ECTS credits at the course developing practical skills- in the case of practical studies; **not applicable**
- number of course hours conducted by academic teachers employed by the Silesian University of Technology as their primary workplace: **15h**

6. Persons conducting particular modes of courses (name, surname, academic degree or degree in arts, title of professor, business e-mail address):

Katarzyna Ujma-Wąsowicz, DSc, PhD., Arch. Assoc. Prof.; katarzyna.ujma-wasowicz@polsl.pl

Iwona Benek, PhD Arch.; iwona.benek@polsl.pl

7. Detailed description of teaching modes:

1) lectures:

- detailed programme's content:

Sending the following information to the PZE (Distance Learning Platform):

- **Practical application of the rules of universal design,**
- **Legal conditions related to accessibility of space for persons with disabilities,**
- **Issues concerned with ergonomics in design, basic anthropometric data related to persons with disabilities (range of reach of a wheelchair user, range of reach of a person using a walking stick, with a guide dog etc.),**
- **Legal conditions related to accessibility of public spaces and public buildings/facilities,**
- **New technological solutions supporting spatial orientation and moving around, including customising information in indoor and outdoor spaces taking into account accessibility for persons with special needs,**
- **Accessibility Standards related to public facilities and residential spaces,**
- **Case studies and best practice examples of solutions based on the rules of universal design.**

Tasks (subjects to be selected from):

- **A design of using public space (indoor and/or outdoor) taking into account accessibility for persons with special needs. The design may be concerned with spatial transformation of areas subject to revitalisation programmes.**
- **A design of an accessible public facility with a specialized function within the scope of health care, social care or recreation and sport, taking into account the rules of universal design. The design may also be concerned with modernisation of existing buildings.**
- **A design of a facility having a residential function or collective dwelling function, taking into account the adaptability of the space to the changing needs of the user.**
- **An analysis of accessibility and functionality of selected spaces and facilities and formulating recommended modifications consistent with the rules of universal design.**

- teaching methods, including distance learning:

Short introductory lectures; moderating discussion during classes; a practical task – team work

- form and criteria for semester completion, including retake tests, as well as conditions for admission to the examination:

A pass is granted by obtaining positive grades from the performed design tasks and preparing and delivering presentation.

- course organisation and rules of participation in the course, with an indication whether a student's attendance is obligatory

Participation in classes is obligatory.

2) description of other teaching modes:

Practical task – guidelines can be found at <https://platforma.polsl.pl>

8. Description of the method for determining the final grade (rules and criteria for evaluation, as well as the final grade calculation method in the case of a course comprising more than one teaching mode, taking into account all teaching modes and all exam dates and credit tests including retake exams and tests):

The final grade from the course is the arithmetic mean of the grade from the practical tasks and the presentation.

9. Method and procedure for making up for

- student's absence from the course: **depending on the teaching mode of the class the student was absent from, it is determined by the teacher during his/her consultation hours in accordance with the teaching mode and the conditions for completing the course stipulated in point 7 of this subject card.**
- differences in study programmes for students changing their field of study, changing university or resuming studies at the Silesian University of Technology: **depending on the particular circumstances and the areas of study missed, this is determined by the teacher during his/her consultation hours in accordance with the teaching mode and the conditions for completing the course stipulated in point 7 of this subject card.**

10. Prerequisites and additional requirements, taking into account the course sequence:

The Basics of Design, Ergonomics, Computer Assisted Design.

Knowledge:

The student has the knowledge related to critical assessment of the observed reality, its creative interpretation and creating designs based on his/her own inspiration using new technologies.

- **the student has the knowledge of the classic and modern technics and technology used in the design process and knows how to use them creatively in design work;**
- **the student understands the role of knowledge and theoretical reflexion in the creative process and the mutual dependencies of the theoretical, practical and legal elements in design**

Skills:

The student is able to plan and execute original artistic and design concepts based on his/her own interpretations and analyses. He/she has the skills needed to express them.

The student is fully aware of his/her usage of various artistic and methodological means and uses their features and the possibility of their mutual interaction at the practical and formal level. U03 – the student is also prepared to act and co-operate with other people working in a team, including interdisciplinary teams.

Competences:

The student aims at defining, based upon their own careful reflection, his/her social duties within the scope of designing spatial solutions and fulfilling these duties properly. K02 – the student participates in reflecting upon the social, scientific and ethical aspects of his/her own work using the rules of universal design.

11. Recommended sources and teaching aids:

- Polish act of 7th July 1994 – Prawo budowlane (*Buliding Law*) (Dz.U z 2019 r., poz. 1186, z późn. zm.)
- Polish act of 19th July 2019 **o zapewnianiu dostępności osobom ze szczególnymi potrzebami (on ensuring accessibility for people with special needs)** (Dz. U. 2019 poz. 1696)
- Polish act of 12th April 2002 w sprawie warunków technicznych, jakim powinny odpowiadać budynki i ich usytuowanie (*on technical conditions to be met by buildings and their location*) (Dz.U. z 7 czerwca 2019, poz. 1065)
- **Standard ISO 21542:2011** Building construction – Accessibility and usability of the built environment

Other design rules (available in Polish language)

- „Standardy dostępności budynków dla osób z niepełnosprawnościami” - uwzględniając koncepcję uniwersalnego projektowania – poradnik. Wydany przez Ministerstwo Infrastruktury i Budownictwa, jako kodeks dobrych praktyk. Warszawa, 04.2018. Dostęp online: <https://www.piib.org.pl/images/stories/aktualnosci/2018-03/StandardyDostepnosci.pdf> oraz

<https://budowlaneabc.gov.pl/standardy-projektowania-budynkow-dla-osob-niepelnospprawnych/>

- „Standardy dostępności dla polityki spójności 2014 – 2020”. Załącznik nr 2 Standardy dostępności dla polityki spójności 2014-2020 dotyczące takich obszarów jak: cyfryzacja, transport, architektura, edukacja, szkolenia, informacja i promocja wydany przez Ministerstwo Inwestycji i Rozwoju. Warszawa, 11.04.2018. Dostęp online:
http://www.funduszeuropejskie.gov.pl/media/55001/Zalacznik_nr_2_do_Wytycznych_w_zakresie_rownosci_zatwiedzone_050418.pdf
- „Włącznik projektowanie bez barier”. Kamil Kowalski, Fundacja Integracja. Warszawa, wydanie 11.2017. Dostęp online:
<http://www.integracja.org/wp-content/uploads/2017/12/W%C5%82%C4%85cznik-projektowanie-bez-barier.pdf>
- Standardy dostępności przyjęte przez JST w Polsce (np. Gdynia, Warszawa, Łódź, Wrocław), np.: „Standardy dostępności dla miasta stołecznego Warszawy, Warszawa, 23.10.2017. Dostęp online:
<https://bip.warszawa.pl/NR/exeres/674BC49F-57EA-4320-8642-E44AB610EBAF.frameless.htm>

12. Description of teachers' competences (e.g. publications, professional experience, certificates, trainings etc. related to the programme contents implemented as a part of the course):

Katarzyna Ujma-Wąsowicz, DSc. PhD. Arch., Associate Professor at the Faculty of Architecture, Department of Theory, Design and History of Architecture.

Main areas of activity:

- Author or co-author of over 50 scientific publications devoted to universal design, ergonomics, issues shaping the architectural and urban environment which are friendly to every user, especially those with disabilities <http://www.bg.polsl.pl/expertus/p/>;
- Academic teacher with 30 years of experience;
- She runs the subject "Ergonomics" in the field of Interior Design;
- With academic teacher Iwona Benek runs the subject „Uniwersal Design” for Polish students at I and II degree of study;
- Since 2000, she has „Building permissions” in the architectural specialty without any restrictions; the author of several completed objects.

Membership in the following organisations:

- President of the Silesian Branch of the Society of Polish Town Planners (*Towarzystwo Urbanistów Polskich*) – od 2015 r. (<http://tup.org.pl/>; <http://tup.slask.pl/>)
- Member of Polish Ergonomics Association (*Polskie Towarzystwo Ergonomiczne*), since 2002
- Member of the Jury of the nationwide „Accessibility Leader” competition, under the auspices of the President of Poland - since 2017 (<http://www.integracja.org/lider-dostepnosci/>)
- Member of the Polish Architecture Council at the Association of Polish Architects – since 2020 (http://www.sarp.org.pl/pokaz/polska_rada_architektury,2574/)
- Member of the Accessibility Council at the Ministry of Funds and Regional Policy; Department of the European Social Fund – since 2020 (<https://www.funduszeuropejskie.gov.pl/strony/o-funduszach/fundusze-europejskie-bez-barier/dostepnosc-plus/rada-dostepnosci/>)

Iwona Benek, PhD Arch., Assistant Professor at the Faculty of Architecture, Department of Design and Qualitative Research in Architecture.

Main areas of activity:

- supporting and carrying out activities related to spatial policy concerning senior citizens;
- scientific activity (scientific publications: <http://www.bg.polsl.pl/expertusbin/expertus.cgi>) – over 50 scientific articles concerned with the subject of senior citizens and issues related to universal design;
- science and technology activities (architectural designs related to long-term care for senior citizens: <https://lab60plus.pl/kategoria/merytoryczne/projekty/>)
- educational, training and promotional activities related to taking into account the needs of the elderly while planning and implementing spatial policies: <https://lab60plus.pl/kategoria/merytoryczne/projekty/szkolenia/>

Membership in the following organisations:

- Polish Gerontology Association /Polskie Towarzystwo Gerontologiczne/, Upper Silesian Branch, since 2011, member of the returning committee.
- Polish Ergonomics Association /Polskie Towarzystwo Ergonomiczne/, Upper Silesian Branch, since 2016, member
- the Metropolitan Senior Citizen Policy Team, since 2020, member.

13. Other information: