# Subject description (syllabus)

Faculty of Architecture, Warsaw University of Technology 2020, field: **Architecture**

## **Architecture for Society of Knowledge** speciality

| **ERGONOMICS** | | **Code ASK2-KH-Er** | **Master's degree** | **semester 2** |
|---|---|---|---|---|
| Classes:<br>**lecture**<br>**design**<br>**exercise**<br>**seminar**<br>**laboratory**<br>**computer classes**<br><br>semester: | Hours/semester:<br>**10**<br><br><br><br><br><br>**summer** | Student's own workload hours:<br>**13** | Status:<br>**Obligatory**<br>Level: advanced<br>Context: **History / theory** | ECTS credits:<br>**1**<br>Exam:<br>**no** |

**Unit delivering this subject:** Department of the Architectural Design and Theory
**Subject coordinator:** Prof. arch. PhD. DSc. Anna Maria Wierzbicka

Teachers:

prof. arch. PhD, DSc. Anna Maria Wierzbicka, prof. arch. PhD. DSc. Ewa Kuryłowicz, prof. arch. PhD. DSc. Karolina Tulkowska–Słyk, MSc. eng. Michał Brutkowski

### Learning outcomes and subject delivery methods

**Objective of the course:**
To know the principles of human ergonomics which are part of the architects workshop in the design process.

**Description of the course:**
Lecture discussing issues related to human ergonomics in the context of designing architectural objects. The subject has been divided into 5 lectures which cover different areas of design related to human ergonomics.

**Scope of taught competencies:**

| No. of the outcome/ area | Description |
|---|---|
| Knowledge | |
| W1. | Has knowledge about varying degrees of complexity in architectural design. |
| W2 | Has detailed knowledge of universal design, including the idea of designing spaces and buildings available to all users, in particular for people with disabilities in architecture, urban planning and spatial planning as well as ergonomics, including ergonomic parameters necessary to ensure the full functionality of the designed space and facilities for all users, especially for people with disabilities. |
| W3 | Has knowledge understands the interdisciplinary nature of architectural and urban design. Has knowledge to obtain information from other science fields and has ability to apply it in the design process in cooperation with specialists in these fields. |
| Skills | |
| U1 | Has able to make a critical analysis and assessment of the architectural design in various techniques. |

| | |
|---|---|
| U2 | Has able to think creatively and taking into account the complex and multi-faceted conditions of architectural design project. |
| U3 | Has the ability to integrate information obtained from various sources and make critical analysis to interpret architectural problems. |
| U4 | Has the ability to implement knowledge to design for all requirements, including accessibility for disabled people. |
| Social competences | |
| S.1 | Can think and act in a creative way. Has the ability use his imagination, intuition, creative attitude to solve complex architectural design problems. |

**Learning outcomes:**

Lecture topics will be divided into 10 hours – 5 lectures of 2 hours each.

Lecture 1. Human factors and ergonomics bases. Male ergonomics, female ergonomics, child ergonomics.
dr. hab. inż. arch. Anna Maria Wierzbicka

Lecture 2. Ergonomics of the place of residence, base. From the scale of small architecture to the elements of the residential interior design - kitchen, bathroom, place to rest, place to sleep. Place of residence – residential.
dr hab. inż. arch. Karolina Tulkowska-Słyk

Lecture 3. Workplace issues of ergonomics. Issues related to work comfort and safety.
mgr inż. arch. Michał Brutkowski

Lecture 4. Ergonomic issues in public facilities, health centers, kindergartens, schools, etc.
mgr inż. arch. Michał Brutkowski

Lecture 5. Universal architectural design. Basic knowledge related to architectural design for people with disabilities. prof. zw dr. hab. inż. arch. Ewa Kuryłowicz

**Teaching methods and forms:**
Knowledge is transfer during lectures, based on theoretical elements and numerous examples of specific architectural solutions. Students are allowed to ask questions.

**Verification methods of learning outcomes**

| Outcome Number | Method of checking |
|---|---|
| **Knowledge** | |
| W.01. | Lectures: final colloquium, assessment of activity in ongoing discussions |
| W.02. | Lectures: final colloquium, assessment of activity in ongoing discussions |
| W.08. | Lectures: final colloquium, assessment of activity in ongoing discussions |
| **Social competences** | |
| U.07. | Lectures: final colloquium, assessment of activity in ongoing discussions |
| U.08. | Lectures: final colloquium, assessment of activity in ongoing discussions |
| **Social competences** | |
| S.01. | Lectures: final colloquium, assessment of activity in ongoing discussions |

**Literature:**


1. Bloomer K.C. and C.W. Moore, Body, memory, and architecture, 1977 New Haven: Yale University Press. xii, 147 p.
2. Chardin T.d., Człowiek, 1984 Warszawa: IW PAX

3. Górski (red) Projektowanie stanowisk pracy dla osób nieoprawnych, Oficyna Wydawnicza Politechniki Warszawskiej, Warszaw 2002
4. Kuryłowicz E., P. Johnni, and C. Thuresson, Projektowanie uniwersalne. Sztokholm miasto dla wszystkich, wydanie pierwsze ed. 1996, Warszawa: CEBRON. 2005, Warszawa: Integracja.
5. Nowak E, Dane antropometryczne dzieci i młodzieży w wybranych krajach Uni Europejskiej, 2003
6. Olszewski J., Podstawy ergonomii i fizjologii pracy, 1997 Poznań, Wyd. Akad. Ekon.