

Course name	Ergonomics
Entity running the course	Faculty of Interior Architecture and Design
Entity for which the course has been prepared	Departmet of Design
Course type	Core / obligatory
Year of study / semester, type of studies	Year II, sem. IV, full-time bachelor's degree
ECTS credits	1 point ECTS
Academic tutor	Ass. prof. Marcin Kuliński, PhD
Aim of the course	Getting to know theoretical basics of ergonomics, the influence of technical surroundings on a human being, and problems of ergonomical design of environment, workplaces, tools and everyday things.
Prerequisites	Having passed the Ergonomics course in 3rd semester.
Learning outcomes:	
- knowledge	Student knows the abilities and limitations of a human in their physical interaction with surroundings, resulting from anatomy, physiology and psychosensual area. Student is aware of norms and standards related with material workplace areas, sitting work, physical work and managing machines and tools.
- skills	Student can analyze a technical object from the perspective of its ergonomic aspects. Student can apply theoretical knowledge of ergonomics in order to humanize the work and adjust technical objects and material environment to the needs and abilities of a human.

# - personal and social competence

Student has the ability to independently gain and polish their knowledge and skills necessary for realization of the designer's tasks.

#### **Course content**

- 1. Estimating and optimizing a computer workplace.
- 2. Interior lightning design.
- 3. Optimizing the arrangement of objects in a work environment.
- 4. Examination of a simple reaction time and a choice reaction time.
- 5. Examination of upper limb strength according to its position.

# Course form and number of course hours

15 hours of exercises.

## Assessment methods and criteria

Theoretical preparation and task execution are to be judged at the end of the

#### Assessment type

Midterm tests and partial grades upon completing each task.

#### Literature

Etienne Grandjean, Fitting the task to the Man. An ergonomic approach, Taylor

& Francis 1980

Donald A. Norman, The design of everyday things, Doubleday Books 1990 Danuta Koradecka (red.), Bezpieczeństwo pracy i ergonomia, CIOP 1997 Jan Młodkowski, Aktywność wizualna człowieka, Wydawnictwo Naukowe PWN

1998

Adam Gedliczka, Atlas miar człowieka. Dane do projektowania i oceny

ergonomicznej, CIOP 2001

Edwin Tytyk, Projektowanie ergonomiczne, Wydawnictwo Naukowe PWN 2001

Materiały dydaktyczne, dostępne w serwisie Laboratorium Ergonomii

Politechniki Wrocławskiej http://ergonomia.ioz.pwr.edu.pl/

# **Teaching aids**

### Language of instruction

Polish