KAPITAŁ LUDZKI
NARODOWA STRATEGIA SPÓJNOŚCI

Projekt współfinansowany przez Unię Europejską w ramach Europejskiego Funduszu Społecznego

UNIA EUROPEJSKA
EUROPEJSKI FUNDUSZ SPOŁECZNY

Course title	ECTS code
Data Visualization in Practice	11.3.1585

Name of unit administrating study

null

Studies

faculty	field of study	type	first tier studies (BA)
Faculty of Mathematics, Physics and Informatics	Informatics	form	full-time
		specialty	all
		specialization	all

Teaching staff

dr Ekaterina Cichosz

Forms of classes, the realization and number of hours	ECTS credits
Forms of classes	5
Wykład (to translate), Ćw. laboratoryjne (to translate)	30 hours - lectures, 30 hours - exercises, student's independent work
The realization of activities	
lectures in the classroom	
Number of hours	
Ćw. laboratoryjne (to translate): 30 hours, Wykład (to translate): 30 hours	

2021/2022 summer semester

Type of course	Language of instruction
elective (to translate)	english

Teaching methods	Form and method of assessment and basic criteria for eveluation or examination requirements
- Metoda projektów (projekt badawczy, wdrożeniowy, praktyczny) (to translate)	**Final evaluation**
- Wykład z prezentacją multimedialną (to translate)	- Zaliczenie na ocenę (to translate)
	- Egzamin (to translate)
	Assessment methods
	- egzamin pisemny testowy (to translate)
	- wykonanie pracy zaliczeniowej - wykonanie określonej pracy praktycznej (to translate)
	- wykonanie pracy zaliczeniowej - projekt lub prezentacja (to translate)
	The basic criteria for evaluation
	Laboratory: 100% evaluation of implemented projects
	Lecture: 40% test of theoretical knowledge 60% evaluation of implemented projects

Sposób weryfikacji założonych efektów kształcenia (DO TŁUMACZENIA)

Required courses and introductory requirements

A. Formal requirements
None

B. Prerequisites
None

Aims of education

The course covers the basics of Data Visualization with the focus on its practical application.

Course contents

1. **Introduction:** data types, types of charts, good vs. bad data visualization.
2. **Visual Perception:** basics of visual perception, visual illusions, depth perception.
3. **Color Perception:** functions of color in data visualization, color-blindness, how to choose colors, semantics of color, the usage of colors in advertisement.
4. **Gestalt Principles in Visual Perception:** how we group elements, recognize patterns, and simplify complex images, application of gestalt principles.
5. **Visual Search:** selective attention, preattentive pop-out, pop-out channels, memory in visual perception.
6. **Representing Quantity:** visual marks and attributes, subitizing, how we interpret charts.
7. **Cheating in Data Presentation:** mistakes to avoid, decluttering, chart design principles.
8. **Other Aspects to Consider:** table design, fonts.
9. **Visualization in Presentations:** graphics, text, color, arrangement.
10. **Visualization in Product Design:** what to consider in the website design.

Bibliography of literature

1. Nussbaumer Knaflic C. Storytelling with Data.
2. Wilke C.O. Podstawy Wizualizacji Danych.
3. Ware C. Visual Thinking.

The student knows the basics of Human Visual Perception and can apply this knowledge to present data effectively.	**Knowledge**
	Basics of data visualization and human visual perception
	Skills
	The student is able to present data effectively.
	Social competence
	The student knows how to present data effectively considering the human visual perception skills. The aquired knowledge could be applied in the design of webpages, user interfaces, smartphone applications, etc. The student is able to identify and correctly interpret charts that "lie".

Contact

ekaterina.cichosz@ug.edu.pl