**Syllabus of an educational component of a degree programme**

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| Name of unit conducting a component | ***Doctoral School of Social Sciences*** |
| Name of an educational component | Data Visualisation Methods |
| Language of education | English |
| Goals of education | **Understanding of:** * Data Visualization History
* Findings of Theory of Perception
* Concept of Color Usage in Data Visuals
* Best Practices vs Worst Practices

**Practical knowledge:*** Ability to use advanced Data Visualization Tool
* Skillset allowing to build basic Data Models
* Practical
* Understanding a Concept and ability to build Dashboards
* Understanding a Concept and ability to build Scorecard
* Ability to build a basic Story-Telling Visuals
* Shaping Visuals for Specific Business Needs
* Shaping Visuals for Data Exploration Goals
* Designing and Building Visuals with Emotions
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| Learning outcomes of an educational component | Theoretical & Practical knowledge on Data Visualization Techniques and how to use them in real life data analysis cases. |
| Verification methods and assessment criteria of learning outcomes obtained by students | Each student needs to complete 4-5 Data Visualisation Tasks that will be graded based on: the correctness of concepts applied to data in hand, adequacy of visualisation tool used for specific data types. |
| Type of an educational component (obligatory/optional) | Obligatory |
| Year of study | 1st |
| Semester  | Summer |
| Name and surname of the coordinator of a component and/or person/s conducting a component  | Ph.D. Krzysztof Tomanek |
| Name and surname of person/s conducting an examination or granting credit in the case when this sposóis other person than conducting a component  | Ph.D. Krzysztof Tomanek |
| Manner of completion  | Visuals build with Advanced Visualisation Tool allowing for Interactive Data Analysis, Data Modelling, Advanced Statistical Analytics. |
| Preliminary and additional requirements  | Basic understanding on Data Types, Social Research Techniques understanding will be an asset. |
| Type and number of hours of courses requiringdirect participation of academic staff and students, if in a given component such courses are included  | 30 |
| Number of ECTS credits assigned to a component  | 3 |
| Balance of ECTS credits  | 3 |
| Applied teaching methods | Interactive workshops with Visualisation Tools installed on student’s computers. Story telling with data. Data preparation, visualisation exercises. Quizzes. |
| Form and conditions of passing a component, including conditions of allowing to take an examination, as well as form and conditions of passing each type of courses included in a given component | Each student needs to complete 4-5 Data Visualisation Tasks and one additional Data Story Telling Project finalising the course. |
| Content of an educational module (with division into forms of courses completion) |  |
| List of basic as well as supplementary literature, knowledge of which is required in order to pass a given component  | Power BI from Rookie to Rock Star, Author: Reza Rad – electronic version to be provided to students.http://www.businessinsider.com/pie-charts-are-the-worst-2013-6https://blogs.oracle.com/experience/entry/countdown\_of\_top\_10\_reasons\_to\_never\_ever\_use\_a\_pie\_charthttp://www.edwardtufte.com/bboard/q-and-a-fetch-msg?msg\_id=00018Shttp://speakingppt.com/2013/03/18/why-tufte-is-flat-out-wrong-about-pie-charts/http://www.biecek.pl/Eseje/indexPomylka.htmlhttp://smarterpoland.pl/ |