**Processing and Visualising Data**

**Course Syllabus**

Course leader  
  
**Janusz Stal**

1. **Course details**

No of hours: 15 or **25**

Field of study : Informatyka Stosowana

Semester: 6

1. **Course leader**

**Prof. UEK dr hab. Janusz Stal**

Room: library building, room 438

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1. **Course description**

Based on the provided and imported data, students learn methods and techniques for data processing, such as extraction, aggregation, selection, grouping, combining, and indexing to become familiar with technologies in use. Data manipulation will be performed using Python Pandas. Next, the processed data will be presented in graphical form along with interactive data visualization methods. Finally, the learned methods and techniques of data processing and visualization will be compared with those available in Microsoft Excel. At the end of the course, students will pursue their own project to process and visualise some real data.

1. **List of Issues**

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| --- |
| **Temat** |
| Introductory classes |
| Document formats and importing datasets |
| Data processing. Selecting, indexing and data aggregation. |
| Methods and types of data visualisation. |
| Comparison of data processing and visualisation in Python and Excel. |
| Practical final project. |
| Project assessment |
| Project assessment |

1. **Class materials**

McKinney Wes, Python for Data Analysis, Third Edition, O’Reilly, <https://wesmckinney.com/book/>

Python Panda Documentation, <https://pandas.pydata.org/pandas-docs/stable/index.html>

1. **Assessment rules**
   1. **Conditions for completing the course**

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| --- | --- | --- |
| **Activity name** | **Description** | **Points** |
| Attendance | Attendance during classes | 0 – 10 |
| Final Project | Implementation of a group project | 0 – 10 |

**ATTENTION! The student must obtain a minimum of 50% of points in each activity to pass the course.**

* 1. **Grading scale**

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| --- | --- |
| **No of Points** | **Grade** |
| ≥ 18 | bardzo dobry |
| ≥ 16 | + dobry |
| ≥ 14 | dobry |
| ≥ 12 | + dostateczny |
| ≥ 10 | Dostateczny |
| poniżej 10 | Niedostateczny |